California Cascadia Subduction Zone Earthquake and Tsunami Response Plan

US Department of Homeland Security
Federal Emergency Management Agency Region IX
California Governor's Office of Emergency Services

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Cal OES
GOVERNOR'S OFFICE OF EMERGENCY SERVICES

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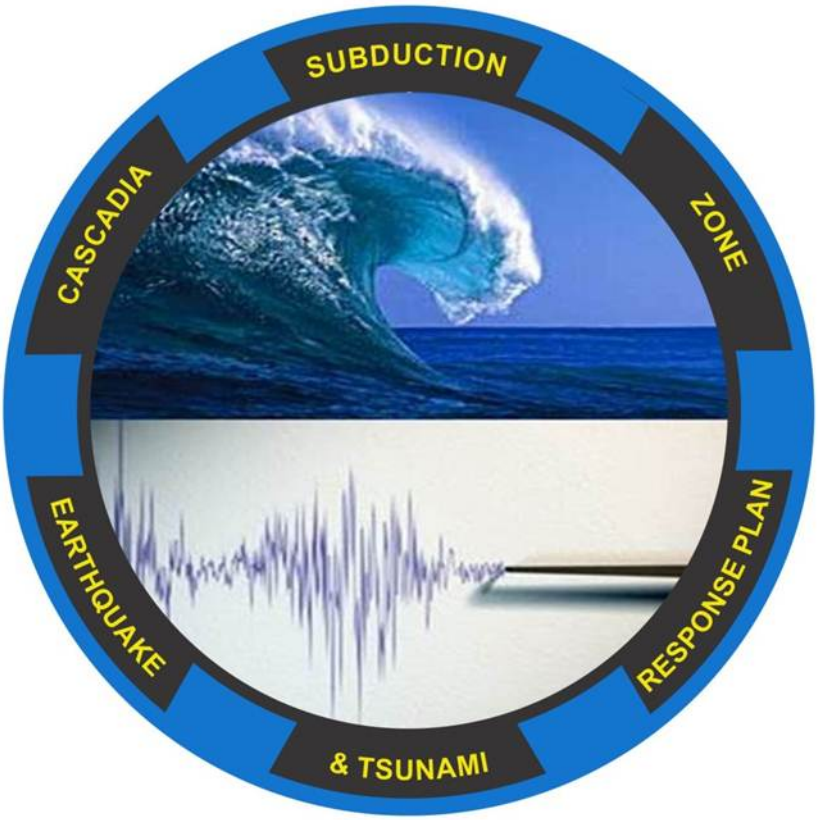

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Message from FEMA RIX Regional Administrator and the Governor's Office of Emergency Services Director

A catastrophic earthquake and tsunami event along the 800-mile-long Cascadia Subduction Zone, which lies off the northwest coast of the United States, presents a significant danger and a tremendous challenge to the State of California and FEMA Region IX, as well as to the states of Oregon and Washington and FEMA Region X. Earthquakes strike without warning and can forever alter people's lives, cripple infrastructure, and disrupt the economic and social stability of communities.

The Cascadia Subduction Zone (CSZ) experiences a full fault rupture, with earthquakes of magnitudes greater than 7.0, once every 500 years, on average. Such ruptures affect the entire northwest region of the country and have direct impacts on other countries and other US states and territories throughout the western Pacific Ocean. The last major earthquake with a full CSZ rupture took place in the year 1700.

In northern coastal California alone, there is the potential for 1,000 or more immediate fatalities, an additional 1,500 persons injured, and 28,000 structures damaged or destroyed as a result of a major earthquake and tsunami event. In addition, transportation infrastructure, communications networks, and water, wastewater, electricity, and natural gas distribution systems would suffer extreme damage.

The *California Cascadia Subduction Zone Earthquake and Tsunami Response Plan* provides a framework outlining how local, tribal, state, and federal governments and private and nongovernmental organizations (NGOs) will respond and coordinate immediately following a catastrophic earthquake along the northern California coast. The framework is set around courses of action that enable a rapid and effective response to meet the needs of survivors. The plan focuses on the immediate application of resources to life-saving and life-sustaining missions, with a goal of stabilizing incident impacts within the first 72 hours.

This response plan is a result of a collaborative process between FEMA Region IX and the California Governor's Office of Emergency Services, resulting in an executable plan that represents the combined capabilities of the private sector; nonprofit organizations; and local, tribal, state, and federal stakeholders. During the planning process, more than 300 emergency management professionals and other personnel provided subject matter expertise in developing this plan. This Whole Community approach has helped foster broad public-private partnerships and has led to the development of a comprehensive plan for emergency response to a catastrophic earthquake in the Cascadia region.

Nancy Ward
Regional Administrator
FEMA REGION IX

Mark Ghilarducci
Director
California Governor's Office of Emergency Services

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Document Change Control

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1 Overview

1.1 Introduction

This document, the *California Cascadia Subduction Zone Earthquake and Tsunami Response Plan* (CSZ OPLAN), describes the joint state and federal response to a catastrophic earthquake and tsunami along the Cascadia Subduction Zone fault affecting northern coastal California. Because a major event along the 800-mile-long CSZ fault is anticipated to affect areas within both FEMA Regions IX and X, the California CSZ OPLAN has been developed in coordination with FEMA Region X's Cascadia Earthquake/Tsunami Response Plan to ensure synchronization of federal response efforts between both regions.

This OPLAN contains:

- Projected impacts of a catastrophic earthquake and tsunami event
- Core Capability objectives, missions, courses of actions (COAs) and end states
- Response capabilities
- Response actions by phase

The document was prepared in accordance with Presidential Policy Directive – 8 (PPD-8), the National Preparedness Goal, and the US Department of Homeland Security (DHS) National Response Framework (NRF) through a collaborative effort of the Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services (Cal OES).

1.2 Acknowledgements

This OPLAN was developed under the guidance of a Senior Leadership Steering Committee (SLSC) that consisted of representatives from FEMA, Cal OES, and the following entities:

- American Red Cross
- California Emergency Medical Services Authority
- California Highway Patrol
- California National Guard
- California Utilities Emergency Association
- CaliforniaVolunteers
- Del Norte County
- Hoopa Valley Tribe
- Humboldt County

- Mendocino County
- Trinidad Rancheria
- US Department of Defense
- US Department of Health and Human Services
- US Department of Transportation
- US Army Corps of Engineers
- Yurok Nation

CSZ OPLAN development involved the cooperation and participation of more than 100 local, regional, state, tribal, federal, private sector, and nongovernmental entities.

The entities that participated or provided information or comments are listed in Table 1.

Table 1. Entities that Participated in CSZ Plan Development

Local, Regional, Tribal, State, Federal, Private Sector, and Nongovernmental Entities that Participated in the Development of the CSZ Plan Annex
Academy of the Redwoods
Access Humboldt
American Red Cross (ARC)
Arcata Fire Protection District
Arcata Police
Association of Bay Area Governments (ABAG)
Bear River Band of the Rohnerville Rancheria
Blue Lake Rancheria
Cal-Ore Life Flight
California Association of Health Facilities
California Governor's Office of Emergency Services (Cal OES)
California Conservation Corps
California Department of Food and Agriculture (CDFA)
California Department of General Services (DGS)
California Department of Health and Human Services (CHHS)
California Department of Public Health (CDPH)
Division of Drinking Water and Environmental Management (CDPH)
Division of Environmental and Occupational Disease Control (CDPH)
Division of Licensing and Certification (CDPH)
California Department of Social Services (CDSS)
California State Transportation Agency (CalSTA)
California Department of Transportation (Caltrans)

Local, Regional, Tribal, State, Federal, Private Sector, and Nongovernmental Entities that Participated in the Development of the CSZ Plan Annex
California Department of Water Resources (DWR)
California Emergency Medical Services Authority (EMSA)
California Environmental Protection Agency (Cal/EPA)
Cal/EPA - California Department of Toxic Substances Control (DTSC)
Cal/EPA - California Office of Environmental Health Hazard Assessment (OEHHA)
California Geological Survey/Earthquake Clearinghouse
California Grocers Association
California Highway Patrol (CHP)
California Hospital Association (CHA)
California National Guard (CNG)
California Natural Resources Agency – CAL FIRE (California Department of Forestry and Fire Protection)
California Primary Care Association
California Technology Agency
California Utilities Emergency Association (CUEA)
CaliforniaVolunteers
City Ambulance Company
College of the Redwoods
Crescent City Volunteer Fire Department
Del Norte County Office of Emergency Services
Del Norte Local Transportation Commission
Del Norte County Schools
Earthquake Country Alliance
Eureka Fire Department
FEMA – National US&R Response System
FEMA – Mobile Emergency Response System (MERS)
Hoopa Valley Tribe
Humboldt Bay Municipal Water District
Humboldt County Office of Emergency Services
Humboldt County Coroner's Office
Humboldt County Department of Health and Human Services
Humboldt County Public Health
Humboldt County Public Works
Humboldt County Sheriff
Humboldt County Medical Society
Humboldt County Mental Health
Humboldt Fire Protection District

Local, Regional, Tribal, State, Federal, Private Sector, and Nongovernmental Entities that Participated in the Development of the CSZ Plan Annex
Humboldt North Coast School Insurance Group
Humboldt State University
Humboldt Transit Authority
Loleta Fire Department
Mendocino County Office of Emergency Services
Mendocino County Office of Education
Mendocino County Department of Transportation
National Communications System (NCS)
National Oceanic and Atmospheric Administration (NOAA)
US National Park Service
Pacific Gas & Electric Company (PG&E)
Pacificorp
Pinoleville Pomo Nation
Redwood Coast Tsunami Working Group
Salvation Army
Smith River Rancheria
St. Joseph Hospital
Trinidad Rancheria
Ukiah Valley Fire
United Way
US Army Corps of Engineers (USACE)
US Army National Guard
US Bureau of Indian Affairs (BIA)
US Coast Guard (USCG)
US Department of Agriculture (USDA)
US Department of Defense (DoD)
US Department of Energy (DOE)
US Department of Health and Human Services (HHS)
US Department of Homeland Security, Office of Infrastructure Protection (OIP)
US Department of Justice (DOJ)
US Department of Transportation (DOT)
US Department of Veterans Affairs (VA)
US Department of the Interior, Geological Survey (USGS)
US Department of the Interior, National Park Service
US DOJ, Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF)
US Environmental Protection Agency (EPA)
US Federal Wildlife Service

Local, Regional, Tribal, State, Federal, Private Sector, and Nongovernmental Entities that Participated in the Development of the CSZ Plan Annex
US Forest Service (USFS)
US General Services Administration (GSA)
US Northern Command (NORTHCOM)
Washington State University
Yurok Tribe

1.3 Scope and Applicability

1.3.1 Scope of Operations

This OPLAN outlines the joint response of the state and federal governments and supporting entities, such as volunteer and other NGOs, to a catastrophic earthquake and tsunami along the Cascadia Subduction Zone fault system in northern coastal California. This OPLAN is an annex to the *FEMA Region IX All-Hazards Plan* and covers the states and territories within the jurisdiction of FEMA Region IX.

The operational framework for a CSZ response will be established through a Unified Coordination Group (UCG), using the principles of a Unified Command, in support of the direct response of local, state, tribal, federal, and nongovernmental entities. This OPLAN describes specific response efforts of these entities and also describes the resources that will be deployed by the federal government. The OPLAN does not address tactics.

This OPLAN is designed to be used by emergency managers at all levels who will be involved in response operations for a catastrophic CSZ event. Additionally, the OPLAN serves as a reference for senior state and federal officials, and their agencies, in providing support to the incident in a coordinated manner.

1.3.2 Authorities and Guidance

This OPLAN is consistent with the principles of the National Incident Management System (NIMS) and will be implemented in accordance with the NRF, the *State of California Emergency Plan*, California's *Cascadia Logistics Support Protocol*, and California's Standardized Emergency Management System (SEMS). Federal actions described in the OPLAN will be implemented in support of local, regional, tribal, state, and nongovernmental entities that have responsibility for the public safety, health, and welfare of populations within their jurisdictions. Specific applicable state and federal authorities are listed as follows:

STATE

- California Emergency Services Act (ESA)
- *State of California Emergency Plan* (SEP) (September 2009)
- *California Catastrophic Incident Base Plan: Concept of Operations (CONOP)*

- California *Cascadia Logistics Support Protocol* (2001)
- California Disaster Assistance Act
- Standardized Emergency Management System (SEMS)
- SEMS Guidelines (September 2006)
- California Disaster and Civil Defense Master Mutual Aid Agreement

FEDERAL

- The Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act)
- Homeland Security Presidential Directive 5, Domestic Incident Management (February 28, 2005)
- Presidential Policy Directive/PPD-8, National Preparedness (March 30, 2011)
- National Preparedness Goal (September 2011)
- National Incident Management System (NIMS) (December 2008)
- The National Response Framework (NRF) (January 2008)
- The National Disaster Recovery Framework (NDRF) (September 2011)
- Post-Katrina Emergency Management Reform Act (PKEMRA) (2006)
- Rehabilitation Act of 1973
- Americans with Disabilities Act (ADA) (1990)

1.4 Organization of the Concept of Operations Plan

This OPLAN consists of a base CONOP and eight annexes, as listed below:

CONOP

The CONOP is designed to provide broad guidance related to response operations and includes:

- Predicted impacts of a magnitude (M) 9.0 earthquake and resulting tsunami caused by a full rupture of the Cascadia Subduction Zone fault.
- The mission of the joint federal/state organization.
- Objectives (decision points for response) and COAs (any sequence of activities that accomplish an objective).
- A schedule of actions, referred to as the Execution Checklist that will be implemented should a CSZ event occur.

Annex A – Operational Coordination

Contains detailed information on incident response task organization and command and control structures.

Annex B – Intelligence

Describes the types of information that are essential for conducting effective response operations and a plan for collecting that information.

Additionally, this annex contains:

- Appendix B-1: Situational Awareness
- Appendix B-2: Incident Information Collection Plan
- Appendix B-3: Detailed regional and county-specific maps.

Annex C

Contains planning and operational execution information for the nine Core Capabilities listed below.

- Appendix C-1: Critical Transportation
- Appendix C-2: Public Information and Warning
    - Appendix C-2 Tab 1: Pre-Scripted Messages
- Appendix C-3: Environmental Response/Health & Safety
- Appendix C-4: Mass Care Services
- Appendix C-5: Mass Search and Rescue Operations
- Appendix C-6: Public Health and Medical Services
- Appendix C-7: Infrastructure Systems
- Appendix C-8: On-Scene Security and Protection
- Appendix C-9: Fatality Management Services
- Appendix C-10: Firefighting

Annex D – Logistics and Resources Movement and Coordination

Annex E – Operational Communications

- Appendix E-1: Communications Contacts

Annex X -- Execution Schedule

The Execution Schedule integrates actions of specific functional areas that pertain to deployment of federal and state resources. It also includes Pre Scripted Mission Assignments (PSMAs).

Annex Y – Acronyms

Annex Z – Distribution List

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2 Situation

The Cascadia Subduction Zone (CSZ) is an 800-mile-long offshore fault, stretching from northern California to Vancouver Island in Canada. The scenario for this plan is a catastrophic earthquake along the length of the fault (as described and modeled by the Cascadia Region Earthquake Workgroup [CREW] and the Department of Homeland Security/Homeland Infrastructure Threat and Risk Analysis Center [HITRAC]) and resulting tsunami (as modeled from the Pacifex 11 Exercise).

It should be noted that the scenario model depicted in the HITRAC document does not account for aftershocks or their compounding effects. Additionally, HAZUS-MH (Hazards US – Multi-Hazard) modeling (FEMA's natural hazard loss estimation program) conducted in January 2012 did not account for aftershocks nor resulting tsunamis. The information analysis conducted by the working groups and planning teams, however, based many of the OPLAN's challenges and assumptions on anticipated aftershocks and subsequent damages.

Based on historical data, modeling, and simulation, a magnitude (M) 9.0 CSZ earthquake off the coasts of northern California, Oregon, Washington, and British Columbia will be immediately devastating. Tsunami inundation and ground shaking will push widespread damage inland, resulting in high numbers of potential fatalities, hospitalizations, evacuees, and destroyed buildings. The event could also trigger a long list of cascading effects within the entire northern California region and surrounding states, including possible severe long-term economic impacts. Conventional response efforts and capabilities will be quickly overwhelmed.

The CSZ earthquake, resulting tsunamis and subsequent aftershocks will likely cause significant disruption to critical infrastructure, such as transportation, energy, telecommunications, utility systems, and public health and medical systems, and will require large-scale response efforts. The high level of expected damage could result in regional, national, and possibly international direct and cascading effects. Effective response operations will require immediate life-saving and life-sustaining measures entailing unique solutions that address impacts in northern California, Washington, Oregon, and beyond, including British Columbia, Alaska, Hawaii, and other Region IX and Region X states and territories.

2.1 Purpose

This OPLAN outlines how agencies and organizations will work together in coordination with affected local level Operational Areas (OAs) to execute joint agency responsibilities and direct federal response, short-term recovery, and mitigation efforts following a catastrophic earthquake and tsunami. The plan focuses on the immediate application of resources to life-saving and life-sustaining missions in an effort to stabilize event impacts within affected areas within the first 72 hours.

The primary objectives of this OPLAN are to save lives, minimize suffering, protect property, and safeguard the environment through response efforts and to set the conditions for recovery of local, state, tribal, and federal governments and

nongovernmental and private sector organizations. This OPLAN does not replace existing state or federal plans that detail agency or department responsibilities in an emergency, nor does it replace any existing Continuity of Operations Plans (COOPs), contingency plans, or standard operating procedures (SOPs). The plan also does not create additional roles regarding CSZ earthquake and tsunami response for local, tribal, or state governments or for nongovernmental or private sector organizations.

2.2 Analytical Support

FEMA Region IX and Cal OES have drawn upon a series of policies, analyses, and modeling documents to inform the scenario, its impacts, and available response capabilities. The documents listed below have assisted in the information analysis phase of this OPLAN:

- *HITRAC Analytical Baseline Study* (November 2011)
- *Cascadia Regional Earthquake Workgroup* (CREW) (2009)
- *Special Publication 115: Planning Scenario in Humboldt and Del Norte Counties, California, for a Great Earthquake on the Cascadia Subduction Zone*, California Mines and Geology (1995)
- California *Cascadia Logistics Support Protocol* (2001)*
- *California Catastrophic Incident Base Plan: Concept of Operations* (2008)
- *HAZUS-MH Earthquake Event Report* (2012)

* Existing CONOP (includes air bridge concept based in Redding)

2.3 Background

This scenario depicts an M 9.0 earthquake that generates a tsunami impacting most of the Pacific Ocean. For the purposes of this OPLAN, the modeling and analyses examine tsunami impacts only for the populated areas in northern coastal California. The OPLAN specifically focuses on the northern California counties of Del Norte, Humboldt, and Mendocino, due in part to their proximity to the fault as well as historical evidence of catastrophic earthquake and tsunami activity in the area. The total population in the three-county scenario area is approximately 290,802.

The geographical area covered by this OPLAN is not all encompassing. It is assumed that the coasts of Washington, Oregon, and Canada will also be affected and that lesser impacts will be experienced to the east and south in California (inland California and the Sacramento and San Francisco Bay Area regions). Additionally, while the focus is on the “no-notice” nature of this event with respect to the identified California counties, plan development assumed that a tsunami “notice” event will likely impact the rest of the Pacific arena, including other US states and territories such as Hawaii and Guam.

2.4 Threat

2.4.1 Historical Significance

This OPLAN addresses the effects of a M 9.0 earthquake and subsequent tsunami along the northern California coast segment of the Cascadia Subduction Zone. Detailed effects of this threat, which include strong ground shaking, surface fault ruptures, permanent land level changes, liquefaction, landslides, and tsunami inundation, are discussed in Annex B – Intelligence.

Graphic illustrations of the incident are shown on the following pages. Figure 1 shows the Cascadia Subduction Zone fault system and Figure 2 is the USGS Shake Map for the northern coastal California region. Figure 3 and Figure 4 show the HITRAC modeling results for tsunami inundation for Eureka/Humboldt Bay and Crescent City.

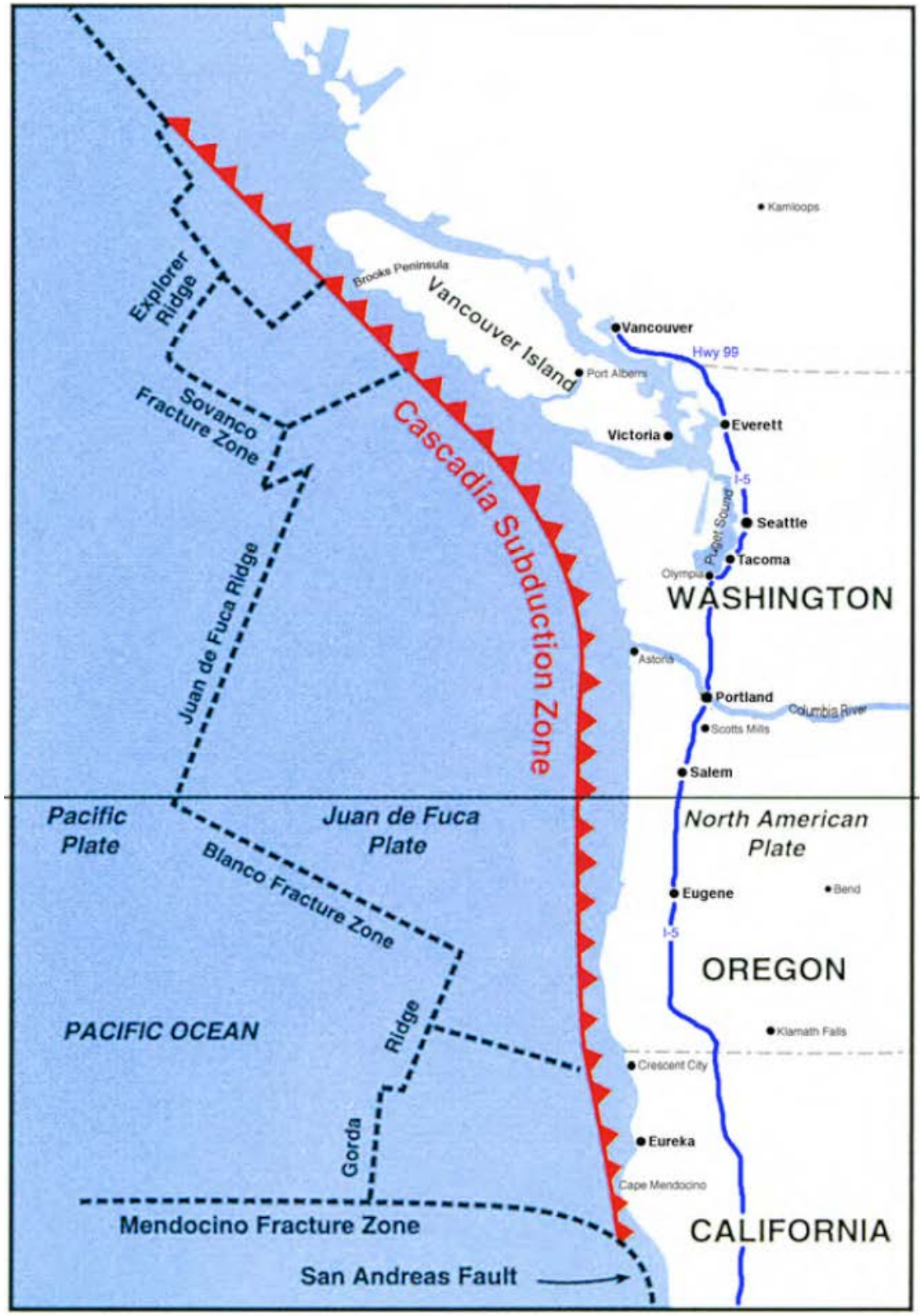
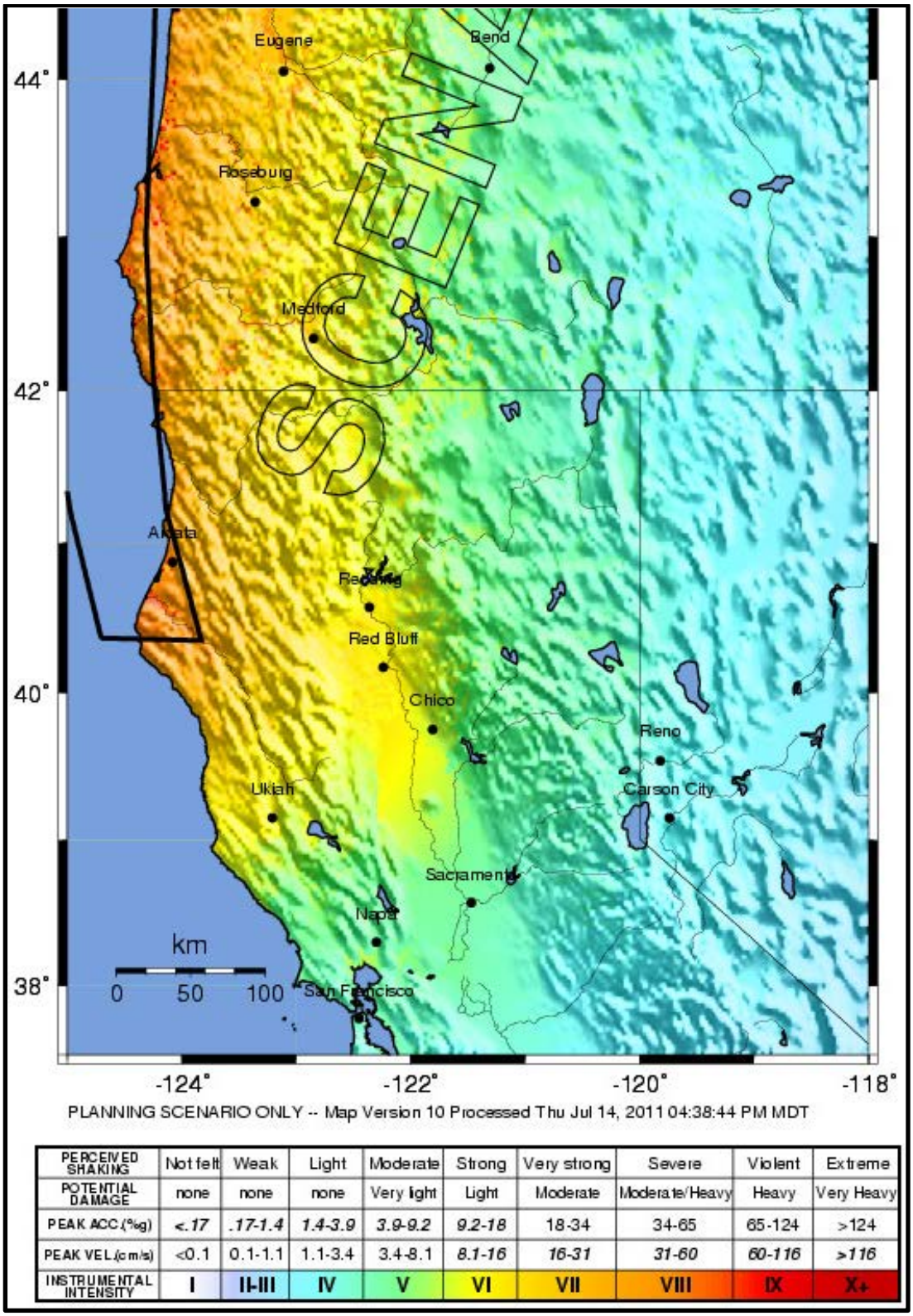


Figure 1. Cascadia fault system.



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

Figure 2. USGS Shake Map.

Figure 3. Expected tsunami inundation, Eureka/Humboldt Bay.

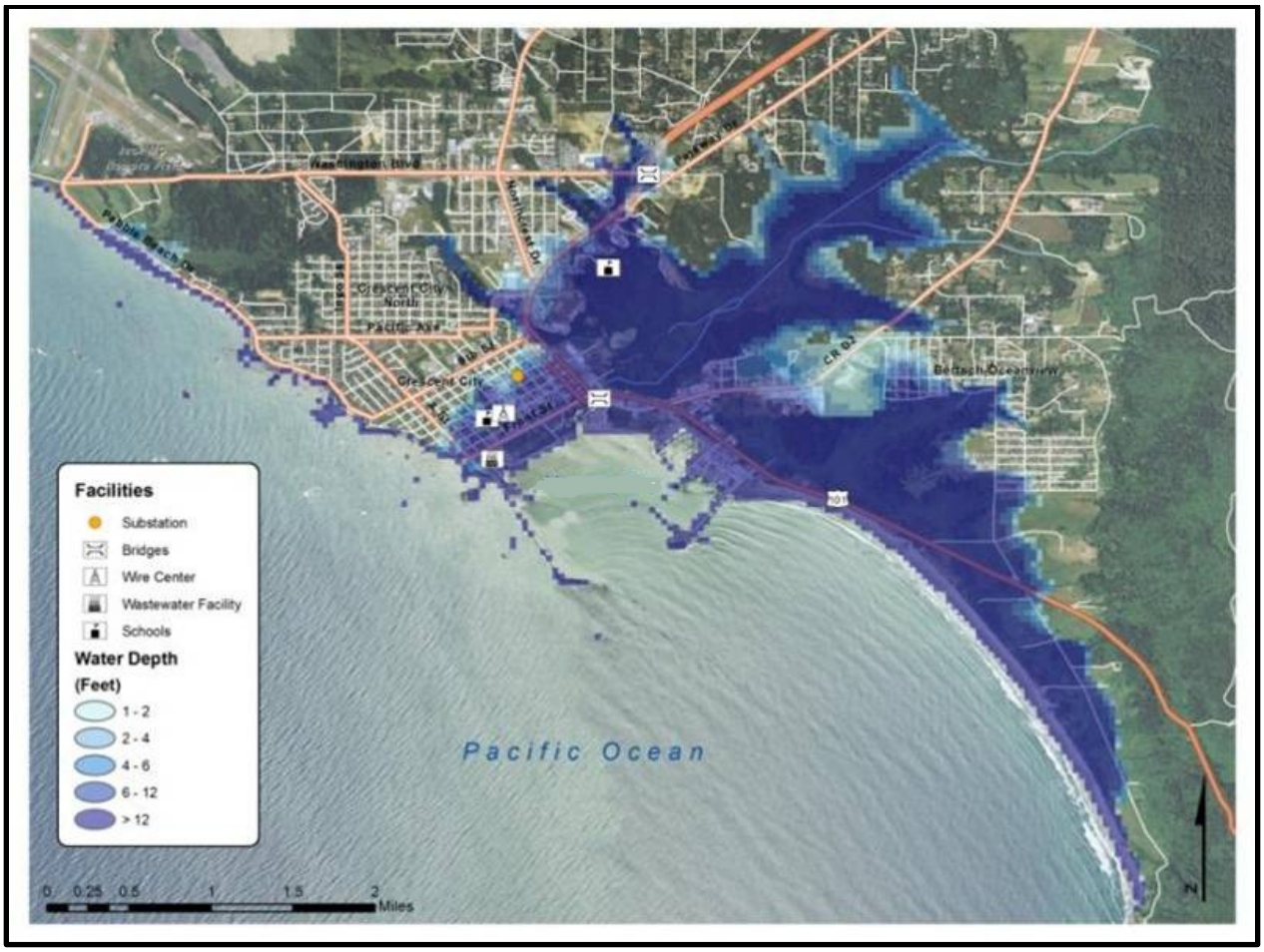


Figure 4. Expected tsunami inundation, Crescent City.

2.5 Critical Considerations

Following a catastrophic CSZ earthquake and tsunami event, there will be significant disruption to basic services to coastal region communities, including disruptions to transportation networks, healthcare services, water availability, power generation, and communications systems. An overview of expected impacts is provided in the Critical Assumptions section below. Detailed incident impacts are described in Annex B.

2.6 Critical Assumptions

- **Transportation networks damaged**
  - Transportation will be the primary challenge for response and recovery throughout the region.
  - Many roads will be obstructed or unnavigable.
  - Response operations will depend heavily on airlift; which is subject to weather conditions.
  - Limited transportation options will impact all functional areas.

  - As much as 10 million tons of debris will be generated by the event and no landfills exist in the region.

- **Communications capabilities limited; accessible communications impacted**
  - Landline and cellular telephones will be impacted.
  - Competition for limited bandwidth will affect communications within and outside impact areas.
  - Delivery of essential and accessible messaging to survivors will be difficult.
  - Reduced response efficiency will result due to inoperable communications systems and power losses.
  - Alternative and accessible communications modes will be needed.
- **Infrastructure compromised**
  - Significant infrastructure damage is expected.
  - Damaged infrastructure (e.g., water mains, sewer lines, and power transmission lines) will impact population centers more than rural areas.
- **Communities isolated**
  - Many rural areas will become isolated due to debris, road damage, and communication system interruptions.
- **Sizeable population in inundation zone**
  - Approximately 21,000 live in the tsunami inundation zone. (The three-county area population can increase by as much as 17,000 per month (yearly average) due to tourism.)
- **Local capabilities overwhelmed**
  - Local first responders will be quickly overwhelmed and shorthanded.
  - Many responders will be unable to report to home stations.
- **Shelter availability insufficient**
  - The number of displaced households is expected to total roughly 24,000, equaling about 60,000 individuals. It is further estimated that 51,000 persons will need to be evacuated as open routes allow.
  - Approximately 35,000 individuals will require mass care sheltering, and another 74,000 are expected to shelter in place in or near their homes and require bulk supplies.
  - Post-CSZ shelter capacity, in terms of space to house disaster survivors, is expected to accommodate only 22 percent of those requiring shelter space.
- **Minimal open space**
  - Minimal open, flat space is available for temporary shelters, staging areas (SAs), etc.

- **Minimal local resources and materials available**
  - The affected region will require supplemental personnel support, fuel, equipment, and resource support immediately.
  - Resource support will draw heavily from state agencies.
  - Competition will be high for state/federal resources.
- **Support teams must be self-sustaining**
  - Any support teams responding to the area must be self-sustaining, requiring significant buildup of support services at base camps and SAs.
- **Continuing impacts**
  - Response operation delays and setbacks are expected due to subsequent tsunami waves, aftershocks, and flooding and their impacts on the availability of response resources such as fuel, shelter, food, and water.

2.7 Core Capability Objectives and Mission-Essential Tasks

Listed below for each Core Capability included in this OPLAN are the objectives and mission-essential tasks for response operations following a catastrophic CSZ earthquake. Detailed breakdowns of tasks by response phase for each Core Capability are further detailed in Annexes A, B, C, D, E, and the Execution Checklist in Annex X.

2.7.1 Operational Coordination

Core Capability Objective

Establish and maintain a unified and coordinated operating structure and process that appropriately integrates all critical stakeholders and supports the execution of all Core Capabilities.

Mission-Essential Task – Establish an Emergency Management Structure that Manages Resource Shortages

Task organization for a catastrophic earthquake, as detailed in Annex A, will be consistent with the NRF, NIMS, and the *California Catastrophic Incident Base Plan Concept of Operations*, dated September 23, 2008. This organization is also consistent with the *California State Emergency Plan* (SEP) of 2009.

2.7.2 Operational Communications

Core Capability Objective

Ensure the capacity to communicate with both the emergency response community and affected populations and establish accessible interoperable voice and data communications between local, tribal, state, and federal first responders.

Mission-Essential Task – Establish and Maintain Functional and Interoperable Communications for Responders

The state will prioritize communications requests for support in the State Operations Center (SOC) and direct state mobile assets using the mutual aid system based on incoming assessments and priorities. Shortfalls that cannot be filled using the mutual aid system will be forwarded to the UCG Operations Section to be filled by federal assets, which include Mobile Emergency Response Support (MERS) and DoD communications resources. These assets will immediately deploy to designated SAs and federal staging areas (FSAs) in support of federal emergency response operations and to fill state communications resource shortfalls received by the Operations Section in accordance with established priorities.

2.7.3 Situational Assessment

Core Capability Objective

Provide all decision makers with decision-relevant information regarding the nature and extent of hazards, any cascading effects, and the status of the response.

Mission-Essential Task – Inform Decision Makers

The primary mission-essential task for the Situational Assessment Core Capability is to deliver information sufficient to adequately inform the decision-making process regarding immediate life-saving and life-sustaining activities and engage governmental, private, and civic sector resources within and outside of the affected area in response efforts aimed at meeting basic human needs and stabilizing incident impacts.

2.7.4 Critical Transportation

Core Capability Objective

Provide transportation (including infrastructure access and accessible transportation services) for response priority objectives, including the evacuation of people and animals and the delivery of vital response personnel, equipment, and services into affected areas.

Mission-Essential Task – Establish Air Operations for Emergency Response and Damage Assessment

Air operations will be established through a phased approach and will be coordinated by a joint state and federal Air Operations Branch that will manage strategic aviation missions, including supply, airlift, and air evacuation operations from outside affected areas, to augment local response capabilities. Tactical air operations will be conducted by local responders and will include helicopter and fixed-wing operations. Initial assessments of critical air operation infrastructure, airfields, communications assets, and aids to navigation will be conducted to better understand the scope of damage done to area aviation capability. Airfields capable of supporting air operations and staging resources will be identified and emergency airfield repairs will be completed using existing airfield assets and augmented by state and federal support, as requested.

2.7.5 Public Information and Warning

Core Capability Objective

Deliver coordinated, prompt, reliable, and actionable information to the entire community through the use of clear, consistent, accessible, and culturally and linguistically appropriate methods to effectively relay information regarding any threat or hazard, actions being taken, and assistance being made available.

Mission-Essential Task – Validate and Provide Internal and External Public Messaging

Earthquake damage to the majority of conventional public messaging methods will require the use of innovative communications methods to convey accessible public safety messages, evacuation instructions, and sheltering and other critical information. Local Emergency Operations Centers (EOCs) and Public Information Officers (PIOs) will deliver targeted public messages to affected populations using all available means, with assistance provided by the Joint Information Center (JIC) located at the Joint Field Office (JFO). Response to media and Legislative Affairs inquiries for damage assessment statistics and estimates will include news conferences and briefings, news releases, and statements from state and federal officials through live broadcasts. EOCs and PIOs will publicize information on disaster declarations, assistance available to disaster survivors, and locations of Disaster Recovery Centers (DRCs).

Federal Emergency Support Function (ESF) #15 components will deploy immediately to augment and support state and local emergency public information efforts through JIC operations, community relations efforts, and international affairs activities. JICs will disseminate public messaging using a phased approach to ensure external messages are accurate, coordinated, and consistent.

2.7.6 Environmental Response/Health & Safety

Core Capability Objective

Ensure the availability of guidance and resources to address all hazards in support of responder operations and affected communities.

Mission-Essential Task – Reduce Hazards (Suppress Fires, Contain Hazardous Materials)

Hazardous materials cleanup and disposal is coordinated by state and federal EF/ESF #10 leads and a Joint Hazardous Materials Task Force composed of representatives from the US Environmental Protection Agency (EPA), the California Environmental Protection Agency (Cal/EPA), the US Department of Defense (DoD), ESF #4 and ESF #10, EF/ESF #8, the US Coast Guard (USCG), state EF8, and other state and local organizations.

2.7.7 Mass Care Services (including for Service Animals and Pets)

Core Capability Objective

Provide life-sustaining services to affected populations, with a focus on hydration, feeding, and sheltering, as well as support for the reunification of families.

Mission-Essential Task – Provide Services and Resources to Support Local and Out-of-Area Shelter Operations

State and federal EF/ESFs #6, #7, #8, and #11 will support local operations with resources and services at shelters, Points of Distribution (PODs), and areas where people congregate, and will also provide support to evacuees. Pre-designated sheltering facilities, such as those operated by the American Red Cross (ARC), will be augmented by the use of nontraditional shelter locations outside the affected area. Response operations will be committed to ensure that the needs of all populations are met to the degree possible within general population shelters, including those with access, functional, and other support needs. State and federal EF/ESF #3 Safety Assessment Program (SAP) resources will identify usable homes and other buildings for sheltering purposes.

Mission-Essential Task – Support Evacuations (including Logistical Needs)

Evacuation operations will be coordinated at the lowest possible level of government and every effort will be made to move survivors out of affected areas to receive services while still supporting those survivors who wish to remain. FEMA will assume the role of both Primary and Coordinating Agency for all federal support for evacuation operations. Local jurisdictions are responsible for developing evacuation plans in advance of a catastrophe. This includes plans for evacuating those with access and functional needs (AFN) and necessary durable medical equipment (DME). Not all local jurisdictions will have established evacuation plans in place and those that do may still require support from the state and federal governments during evacuation operations. FEMA will coordinate the efforts of other federal ESF-support agencies for transportation, security, and logistics support for large evacuations.

2.7.8 Mass Search and Rescue Operations

Core Capability Objective

Deliver traditional and atypical search and rescue capabilities, including personnel, services, animals, and assets, to survivors in need, with the goal of saving the greatest number of individuals at risk in the shortest time frame possible.

Mission-Essential Tasks

A mixed-deployment concept of Search and Rescue (SAR) and Urban Search and Rescue (US&R) capabilities will be used, with some assets sent directly to affected local jurisdictions and some centrally controlled from mobilization sites. Centrally controlled assets will remain under the operational control of the UCG for surge capability for potential aftershocks or other simultaneous response requirements. The California Fire

and Rescue Mutual Aid System will activate all California task forces, which are on a "first-up, on-call" system.

2.7.9 Public Health and Medical Services

Core Capability Objective

Provide life-saving medical treatment via emergency medical services and related operations and avoid additional disease and injury by providing targeted public health and medical support and products to all people in need within the affected area.

Mission-Essential Task – Provide Medical Surge Capabilities

Saving lives is the number one priority. The overall strategy to meet the medical needs of affected populations requires integrated plans for acute and chronic care, patient movement, and preservation of public and environmental health throughout impacted communities. Medical care will shift from a focus on the individual to population-based care to facilitate care to as many as possible (see CDPH *Standards and Guidelines for Healthcare Surge During Emergencies*, 2007).

Agencies that support the Public Health and Medical Services Core Capability will coordinate protection, recovery, and sustainment of the acute care infrastructure, to include critical supply lines (e.g., water, pharmaceuticals, and medical supplies). Immediately following a CSZ event, the California Health and Human Services Agency (CHHS) and its designated departments through state EF8, along with the California National Guard (CNG), the US Department of Health and Human Services, (HHS) and DoD, will implement and direct the acute care medical response in support of OAs. State and federal EF/ESF #8 leads will deploy acute care resources into impacted areas, as requested, and begin coordinating additional resources to meet the acute medical needs of impacted populations. CNG will transport EF8 life-saving resources with on-call aircraft first flights to save lives in the impacted OAs.

State EF8 is also responsible for determining chronic care needs and requesting federal ESF #8 support through the SOC. The state will provide the information needed for federal support of chronic care needs. The Emergency Prescription Assistance Program (EPAP), Substance Abuse and Mental Health Services Administration (SAMHSA) Crisis Counseling Assistance Program, and the Disaster Case Management (DCM) Program will be implemented.

Mission-Essential Task – Execute Patient Evacuation/Movement

To support patient movement and evacuation in the affected area, EF/ESF #8 will assign the highest priority to life-saving activities, including patient movement and evacuation. Patient evacuation movement will be conducted to evacuate incapacitated/damaged facilities and to meet healthcare needs through a balance of creating capacity within the affected area and reducing demand through evacuation. State and federal resources will be activated to support these activities, and EF/ESF #8 will deploy the resources necessary for patient evaluation and stabilization to mission-capable airports.

Mission-Essential Task – Maintain Public Health and Environmental Health

The California Department of Public Health (CDPH) is the lead department of public health and environmental health related activities within California and is responsible for all environmental and public health activities during response and recovery. All public health missions will be coordinated with state and federal EF/ESF #8 leads. Public health and environmental health operations provide a wide range of life-sustaining activities that begin during response and continue well into recovery. By preventing disease, public health interventions reduce the total number of patients that will seek care in the affected area. ES/ESF #8 will conduct initial assessments within the affected area using local resources and deployed mobile laboratories to evaluate water quality and conduct other community assessments after immediate incident threats have stabilized.

2.7.10 Infrastructure Systems

Core Capability Objective

Stabilize critical infrastructure functions, minimize health and safety threats, and efficiently restore and revitalize systems and services to support a viable, resilient community.

Mission-Essential Task – Stabilize and Provide Critical Utilities for Priority Infrastructure: Water/Wastewater, Power, Communications, and Natural Gas

In coordination with the California Utilities Emergency Association (CUEA) and state EF8, FEMA will establish partnerships with private sector organizations before a catastrophic earthquake occurs. These partnerships will take many forms (e.g., memorandums of understanding (MOUs) or task forces) but each will be established to ensure that local, state, and federal efforts facilitate private sector infrastructure repairs and lead to the rapid and effective restoration of utility services. When a disaster occurs, pre-established task forces will convene to conduct assessments and adjust plans based on the actual situation. Task force members will help establish priorities and employ state and federal assets and resources (such as heavy lift air operations and security) to facilitate and augment rapid triage of critical infrastructure to restore functional operability. Inpatient health care facilities will be given high priority for restoration of power and water.

Mission-Essential Task – Establish Lines of Supply: Sea Ports, Airports, Railways, and Roads

Logistics support will be provided by local, state, federal, and private sources and in accordance with defined response operations phases. Throughout all phases of response, transportation and logistics coordination will be the joint responsibility of Cal OES and FEMA. This joint operation will emphasize re-establishing transportation systems in order to facilitate the effective movement of people, materiel, and equipment. This integration will ensure unity of effort and efficient use of transportation assets. Situational awareness of incident impacts on the state's transportation infrastructure will be paramount to implementing a logistical capability for the delivery of response resources and employment of response teams. Movement of resources and people in and around the affected area will be impacted by initial severe damages to ground

transportation infrastructure. The initial logistics strategy will be to focus on delivery of response resources and personnel by air through various operable civil and military airfields.

Mission-Essential Task – Supply Emergency Water and Sanitation Needs for Response Operations

During response, local utility companies (private and public) are responsible for procuring and distributing alternate emergency drinking water supplies and handling wastewater and sanitation needs for populations within their service areas. A CSZ disaster, however, will overwhelm the capabilities of local utility companies and they will likely request assistance from state and federal entities. State and federal EF/ESF #3 leads, supported by EF/ESFs #1, #7, and #8, will assist with the restoration of potable water systems and will supply emergency water and sanitation to shelters and critical facilities. Initially, bottled water and packaged portable sanitation capability (personal sanitation kits and portable toilets) will be provided to the hardest hit areas, first using local and state emergency stocks and then national stocks, which will be flown into SAs to support mass care sites and critical infrastructure. EF/ESF #3, supported by EF/ESF #7, will provide further assistance and coordination of the efforts of commercial water providers, distributors, and bottling companies to facilitate the delivery of bottled and bulk water to PODs, shelters, and local stores that have power. Shipping and bulk water distribution transportation assets will be coordinated by Cal OES and FEMA.

Mission-Essential Task – Conduct Safety Assessments

Following a CSZ event, the SOC will activate the SAP. The Emergency Management Assistance Compact (EMAC)/SOC Mission Tasking Coordinator, following SOC procedures, will normally request and coordinate out-of-state SAP resources, under the direction of the Operations Section Chief. All assignments for this scenario will be accomplished using the Incident Command System (ICS) structure of the UCG.

Mission-Essential Task – Establish Emergency Power Delivery

In the event of a CSZ earthquake, Cal OES will immediately activate state EFs 3 and 12 in the SOC to support emergency power delivery and private sector efforts to repair critical power infrastructure. FEMA will activate ESFs #3 and #12 and deploy representatives to the Regional Response Coordination Center (RRCC) and the SOC. EF/ESFs #3 and #12 will operate out of the JFO, once established. The US Army Corps of Engineers (USACE), serving as both the Primary and Coordinating Agency for ESF #3, will coordinate contracted generator support and will coordinate DoD and other federal agency assets to provide alternate sources of power for critical facilities.

Mission-Essential Task – Conduct Debris Clearance and Disposal

The state will immediately activate an intergovernmental Debris Management Task Force in the SOC to oversee debris clearance and removal operations. Once the JFO is established, the Debris Management Task Force reports to the Operations Section at the JFO, overseeing debris clearance and removal planning and execution through the coordinated use of local, state, federal, NGO, and private sector staff and equipment. The task force takes a phased approach to debris removal, first focusing on clearing major

SAs (ports and airfields) and then working from these locations to clear primary land routes for establishing lines of supply. These actions occur simultaneously with local debris clearance operations aimed at clearing critical facilities and roadways for emergency response.

During the Immediate Response phase (Phase 2A), local, state, and federal debris operation entities clear debris or move debris out of the way. After the immediate response, debris removal will be conducted along primary and secondary transportation corridors to allow accessible access to mass care sites and critical infrastructure and to enable continued response operations. During the Sustained Response phase (Phase 2C), the task force will use temporary disposal and reduction sites (TDRS) until permanent solutions can be found. Simultaneously, the task force coordinates debris removal and disposal efforts across jurisdictional boundaries, since no landfill sites exist within the affected area.

2.7.11 On-Scene Security and Protection

Core Capability Objective

Ensure, through law enforcement and related security and protection operations, a safe and secure environment for people and communities located within affected areas and for all traditional and atypical response personnel engaged in life-saving and life-sustaining response operations.

Mission-Essential Tasks – Provide Safety, Security, and Support to Emergency Response Operations

On-Scene Security and Protection operations rely on existing systems and will initially be used to fill identified security shortfalls. When security requirements cannot be met by local law enforcement resources, additional state assets and assets from neighboring states will be sought, including assets made available through EMAC agreements and CNG assets coordinated through Title 32 (National Guard). Local law enforcement officials will handle complex incident security related to crowd control and looting. The California Highway Patrol will manage evacuations and traffic flow. CNG will augment civil law enforcement agencies by providing security forces for SAs, shelters, PODs, and critical infrastructure, as requested. ESF #13 will provide additional federal support for law enforcement.

2.7.12 Fatality Management Services

Core Capability Objective

Provide fatality management services, including body recovery and victim identification, by working with local and state authorities to provide temporary mortuary solutions, sharing information with Mass Care Services for the purpose of reunifying family member and caregivers with missing persons/remains, and providing counseling to the bereaved.

Mission-Essential Tasks

The County Medical Examiner (ME) or Sheriff-Coroner is the primary authority for fatality management within their respective OA. Coroners/MEs will request mutual aid, as necessary; if sufficient resources are not available via SEMS, the state will request federal resources. Search and rescue operations will extract fatalities from damaged buildings and other structures and arrange transportation to locations identified by County Coroners. County Coroners and ESF #8 representatives will use the existing fatality management infrastructure within the affected area as well as surged resources and resources activated through the Coroners' mutual aid system to carry out fatality management operations.

2.7.13 Firefighting

Core Capability Objective

Firefighting efforts focus on suppressing fires and ensuring safety guidance is disseminated and implemented for both affected communities and responders.

Mission-Essential Task – Suppress Fires

Fire service capabilities will include all public and private entities that assist the state in firefighting activities. Under Governor Order via the California Emergency Services Act, all fire protection agencies become an organizational part of the Cal OES Fire and Rescue Division. This division acts as the primary coordination authority for mutual aid activities for California. California Emergency Function (EF) 4 supports all firefighting activities on federal lands and in urban areas.

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3 Mission

The mission of the unified state/federal organization is to save lives, minimize suffering, protect property, and safeguard the environment through response efforts and to set the conditions for recovery of local, tribal, state, and federal governments and the private sector immediately following a Cascadia Subduction Zone earthquake and tsunami along the west coast of the United States.

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4 Execution

4.1 Senior Leaders Intent

The mission of the unified effort of local, tribal, state, and federal emergency response organizations will be achieved through the formation of a joint state/federal UCG, using ICS concepts and principles consistent with NIMS and SEMS. The goal is to carry out response activities consistent with the priorities of the Governor and sovereign Tribal Nations and the objectives set forth in this OPLAN to support response at the local and regional level for the northern California coastal region.

4.2 CSZ Plan Concept of Operations Overview

General Sequence of Response

The CONOP described in brief here and expanded upon in Annex C is applicable from the moment the earthquake and tsunami occur through the 72-hour mark. The OPLAN also describes preparedness activities that should take place before the incident occurs (Phase 1) as well as response activities that will take place beyond this 72-hour window (Phase 2C) (see Figure 5.)

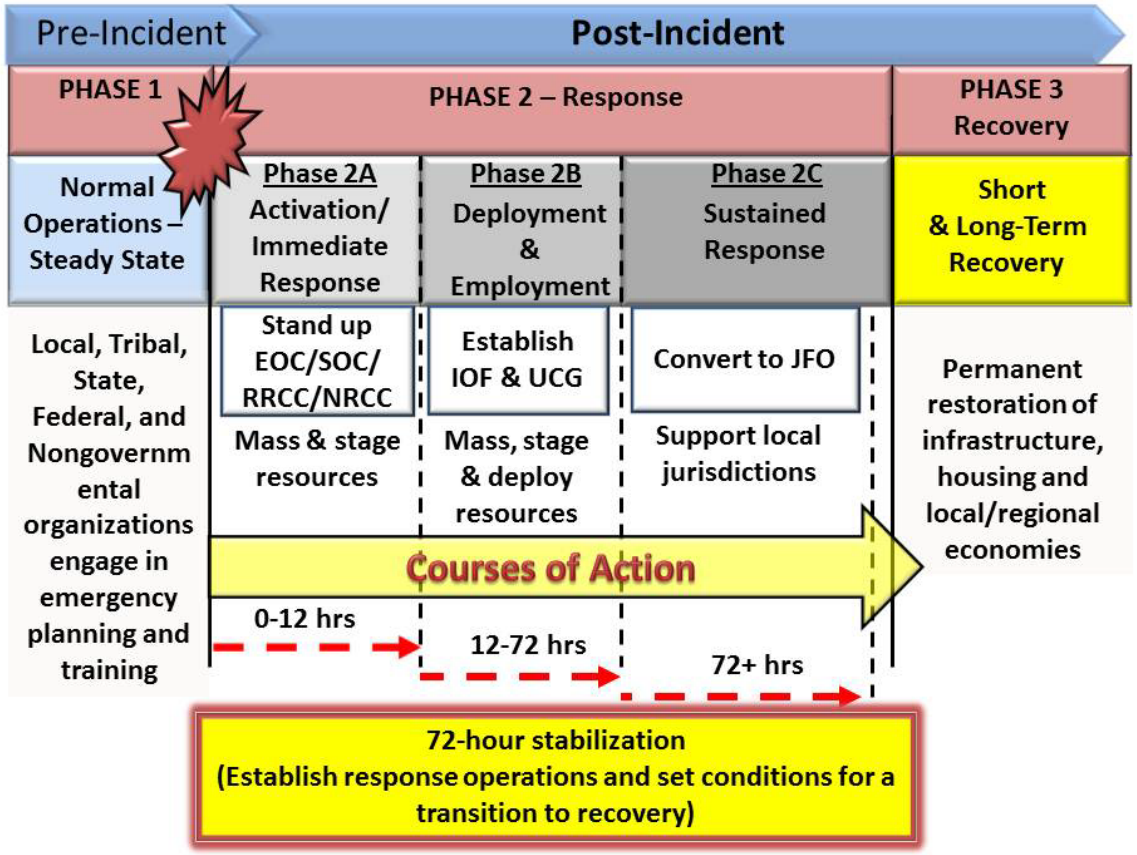

Figure 5. Time phasing of response operations.

4.2.1 PHASE 1: Normal Operations

The purpose of Phase 1 is to coordinate with private sector, NGO, local, tribal, state, and federal stakeholders to prepare for a catastrophic earthquake. The State of California, local jurisdictions, and FEMA Region IX will:

- Participate in full-scale Golden Guardian exercises.
- Conduct or participate in tabletop exercises or training events.
- Conduct or participate in an annual review of operational plans to determine revision requirements.
- Participate in the Regional Interagency Steering Committee (RISC) meetings.
- Maintain planning and training initiatives with volunteer and private organizations continually.
- Conduct “whole community” response and recovery planning that includes risk reduction and mitigation elements, in conjunction with stakeholders.

This stage includes planning, gathering resources and information, and determining mitigation actions. State and local governments adopt laws and develop MOUs and MOAs focused on mitigating hazards that would likely occur following an earthquake.

Phase 1 activities also involve organizing, equipping, training, and exercising response personnel and teams. These activities should lead to evaluating and improving earthquake plans and procedures at local, state, and FEMA regional levels.

Phase 1 planning includes developing resource requirements and PSMAs for push-packages of resources and materials needed immediately following a catastrophic earthquake to speed their delivery. Planning also includes preparing drafts or pre-scripted versions of emergency public information messages and establishing effective procedures and processes for their receipt and understanding by the affected public.

4.2.2 PHASE 2: Response

Phase 2 comprises activities occurring from the onset of an earthquake through a point where processes, procedures, and resources are working effectively for a stabilized, sustained response and conditions are set for recovery. By the end of Phase 2, the UCG operating out of a JFO will have developed and coordinated support for continued response and recovery planning.

4.2.3 Phase 2A: Activation (Immediate Response) (I + 12 hours)

During Phase 2A, local responders prioritize and carry out SAR, firefighting, acute medical care, patient evacuation, mass care activities, emergency public messaging, as well as interagency communications.

State and local responders conduct assessments and initiate response actions in support of saving and sustaining lives. The state's emergency management organization (SOC, Regional Emergency Operations Centers [REOCs], etc.) is activated, per the California State Emergency Plan. Operational Periods are established and Incident Action Plans (IAPs) are developed.

FEMA Region IX's RRCC activates and collects situational assessment data from the state and begins the process of activating appropriate ESFs and federal agency resources. An Air Operations Branch is established and begins conducting air operations into and out of the impacted area. A FEMA Incident Management Assistance Team(s) (IMAT) is deployed, along with logistical capabilities and initial response teams and resources. Incident Support Bases (ISBs) and SAs are activated to support the local and state jurisdictions.

Priority road clearance operations are planned and implemented to support life-saving response activities. Volunteer organizations such as the American Red Cross and Community Emergency Response Teams (CERTs) activate to save lives and provide situational awareness to emergency responders.

State and federal resources that will be critical for sustained response and recovery efforts are activated and mobilized to the affected area.

Coordinate with mitigation and infrastructure protection to include elements and leverage steady state modeling and assessments to identify vulnerabilities to key infrastructure and responding capabilities.

4.2.4 Phase 2B: Deployment and Employment (I + 12-72 hours)

Phase 2B focuses on deploying resources and personnel to the impacted area. Requests for resources and personnel that cannot be filled at the local or state levels are filled through EMAC agreements or the federal government through FEMA Region IX. Additional SAs are established for search and rescue, mass care, and medical treatment support. Patient movement and chronic medical treatment begins.

Road clearance operations to support life-saving response activities continue, and additional resources are committed to road clearance in support of critical infrastructure repair and hazardous materials response. Planning for logistical routes by establishing a hub-and-spoke system of air and road networks is completed and put into action for immediate and continuing needs.

PODs, as designated by city and county emergency managers, are established to meet the needs of survivors and emergency responders. Fixed-wing and rotary-wing aircraft provide significant support by the end of Phase 2B.

Communications equipment and personnel have arrived and begin to support federal responders and state and federal operations.

4.2.5 Phase 2C: Sustained Response (I + 72+ hours)

The JFO is established and the UCG assumes operational control of state/federal response to the incident. The UCG establishes and maintains a regular Operational Period and develops an IAP. FEMA Region IX's RRCC maintains operational readiness and supports the UCG by filling resource requests.

Lines of supply from SAs to hospitals, schools, shelters, and other mass care sites are refined and maintained. The joint state/federal Planning Section of the UCG develops COOPs to plan actions to undertake in the event of aftershocks. Commodities continue to arrive at SAs.

Air operations continue strategic airlift missions and provide for prioritized medical evacuations. Base camps are maintained and demobilized as infrastructure is repaired. Power, water, and fuel systems and associated critical infrastructure are repaired and restored to functional levels.

PODs and shelters ensure demobilization activities are coordinated as critical systems are repaired.

Identify and communicate mitigation opportunities during the response that may speed stabilization and restoration efforts, as well as to eliminate or reduce potential future risks.

4.2.6 PHASE 3: Long-Term Recovery

Recovery is established to ensure that communities transitioning out of response operations are well positioned to engage early in organizing and planning for major reconstruction and redevelopment necessary for recovery.

Private sector, local, tribal, state, and federal actions are engaged to restore services, continue government operations, and promote economic recovery following a catastrophic earthquake. All life-saving activities have been completed.

Phase 3 includes assisting individuals and restoring critical infrastructure and essential governmental and commercial services to functional conditions. Private sector involvement is critical in re-establishing normal government and business operations and a return to normalcy. Long-term recovery actions are beyond the scope of this plan.

Long term recovery operations are covered under the National Disaster Recovery Framework (NDRF). Early integration of NDRF principles and the establishment of recovery organizational structures are essential to the successful transition from response operations to recovery operations.

A discrete and well-resourced recovery focus, operating at the same time as response activities, is established early to ensure that the impacted communities transitioning out of response are well positioned to organize and plan for the major reconstruction and redevelopment necessary for recovery.

Mitigation activities can include the identification of risk reduction opportunities that may have prevented or minimized hazards associated with the event, and adapt mitigation plans.

4.3 Federal Response Tasks by Phase

Following the concept of the phased response, the federal government provides response resources to a CSZ incident in coordination with local, tribal, and state response activities. Federal PSMAs will be activated via the RRCC to mobilize ESFs and their resources.

Phase 1 includes coordination with local, tribal, state, federal, and NGO stakeholders to ensure plans are updated, exercised, and viable prior to a CSZ incident. Key actions during this phase include pre-identification of critical sites and resources, codifying plans and support agreements, conducting exercises and incorporating observations, and continuing to build stakeholder partner relationships.

Phase 2A begins with the onset of the incident and involves rapid initial assessments, initiation of resource movement, and the formation of the UCG. Key actions include the establishment of response/coordination centers, re-establishment of contact with impacted areas/regions, delivery of appropriate public messaging, the gaining of situational awareness along available lines of communication, and the activation and deployment of teams and life-saving resources.

Phase 2B continues the activities of Phase 2A and manages the movement of federal resources in coordination with the UCG and the state. Key actions during this phase include establishment of the Initial Operating Facility (IOF) for UCG operations, activation of ISBs and FSAs, continued processing of situational awareness information,

deployment of life-saving resources in support of state requests, and coordination of federal resources operating under existing authorities.

Phase 2C continues the expansion and sustainment of available federal resources to support a Whole Community response while simultaneously setting the conditions to expedite a transition to recovery. Key actions include the transition of the IOF to a JFO, appropriate incorporation and management of military resources under a dual-status headquarters, and maximization of federal communications systems in support of Whole Community stakeholders.

4.4 Key Federal Roles and Responsibilities

4.4.1 Specific Agencies and Responsibilities

The overarching responsibility of the federal government in earthquake and tsunami response is to support local action, in coordination with the state, through the UCG, and provide resources/capabilities when local and state resources and capabilities are inadequate or exhausted. Per Homeland Security Presidential Directive 5 (HSPD-5), the federal government's response/support to disaster incidents must be in accordance with the NRF and NIMS. As described in the NRF and the National Preparedness Goal, the federal response will be carried out through the structure of Core Capabilities by agencies that serve in federal ESF roles. Resources and capabilities, including emergency teams, support personnel, specialized equipment, operating facilities, and assistance programs, are delivered through the response Core Capabilities, which organize the essential elements of federal support and coordination. ESFs, each led by a primary agency, are the coordination mechanisms for the delivery of each of the Core Capabilities under a Stafford Act response. Specific ESF missions, organizational relationships, and primary and support agency responsibilities are defined in the NRF. In California, state response activities will also be carried out through agencies that serve in state EF roles.

The Robert T. Stafford Disaster and Emergency Relief Act provides FEMA with the authority to coordinate the federal government response to a major earthquake event. Responsibilities include coordination of life-saving assistance, comprehensive national incident logistics planning/management and sustainment capability, mass care, emergency assistance, disaster housing, human services, issuance of Mission Assignments, resource and human capital, incident action planning, financial management, emergency public information and protective action guidance, media and community relations, and congressional and international affairs.

4.4.2 Federal Emergency Support Function and California Emergency Function Roles and Responsibilities

Each Core Capability is served by one or several federal ESFs and/or California EFs. ESF and EF primary and supporting agencies are outlined in Table 2.

Table 2. Federal Emergency Support Functions (ESF) and State Emergency Functions (EFs) primary and coordinating agencies

Federal Emergency Support Functions(ESF)/State Emergency Functions (EF)		
ESF # / EF	**Federal ESF Title** **(Coordinating Agency)** **(Primary Agency)**	**CA EF Title** **(Lead Agency)** (Called "Coordinating" in federal List)
1	**Transportation** Coordinating: DOT Primary: DOT	**Transportation** Lead: State Transportation Agency
2	**Communications** Coordinating: DHS/NCS Primary: DHS/NCS/FEMA	**Communications** Lead: Business Consumer Services and Housing Agency
3	**Public Works and Engineering** Coordinating: DoD/USACE Primary: DoD/USACE/FEMA	**Construction & Engineering** Lead: Business Consumer Services and Housing Agency
4	**Firefighting** Coordinating: USDA/Forest Service Primary: USDA/Forest Service	**Fire and Rescue** Lead: Cal OES
5	**Emergency Management** Coordinating: DHS/FEMA Primary: DHS/FEMA	**Management** Lead: Cal OES
6	**Mass Care, Emergency Assistance, Housing, and Human Services** Coordinating: DHS/FEMA Primary: DHS/FEMA & American Red Cross	**Mass Care and Shelter** Lead: Health and Human Services Agency
7	**Logistics Management and Resource Support** Coordinating: GSA/DHS/FEMA Primary: GSA/DHS/FEMA	**Resources** Lead: Business Consumer Services and Housing Agency
8	**Public Health & Medical Services** Coordinating: HHS Primary: HHS	**Public Health & Medical** Lead: Health and Human Services Agency
9	**Search & Rescue** Coordinating: DHS/FEMA Primary: DHS/FEMA/USCG/NPS/DoD	**Search & Rescue** Lead: Cal OES
10	**Oil & Hazardous Material Response** Coordinating: EPA Primary: EPA/USCG	**Hazardous Materials and Oil** Lead: California Environmental Protection Agency
11	**Agriculture and Natural Resources** Coordinating: USDA Primary: USDA/DOI	**Food and Agriculture** Lead: Department of Food and Agriculture

Federal Emergency Support Functions(ESF)/State Emergency Functions (EF)		
ESF # / EF	**Federal ESF Title** **(Coordinating Agency)** **(Primary Agency)**	**CA EF Title** **(Lead Agency)** (Called "Coordinating" in federal List)
12	**Energy** Coordinating: DOE Primary: DOE	**Utilities** Lead: Natural Resources Agency
13	**Public Safety & Security** Coordinating: DOJ/ATF Primary: DOJ/ATF	**Law Enforcement** Lead: Cal OES
14	*** Superseded by the National Disaster Recovery Framework **	**Long-Term Recovery** Lead: Cal OES
15	**External Affairs** Coordinating: DHS Primary: DHS/FEMA	**Public Information** Lead: Cal OES
16	No ESF exists	**Evacuation** Lead: State Transportation Agency
17	No ESF exists	**Volunteer and Donations Management** Lead: CaliforniaVolunteers
18	No ESF exists	**Cyber Security** Lead: California Technology Agency

4.5 Incident Coordination

4.5.1 State and Local Coordination Requirements

A catastrophic earthquake will require response actions beyond local capabilities. Incident management activities will be carried out in accordance with the *California Catastrophic Incident Base Plan CONOP*.

Following a major CSZ earthquake, Cal OES will activate the SOC and appropriate REOCs, and FEMA will activate the NRCC at FEMA headquarters and the RRCC in the FEMA Region IX office in Oakland. Further organizational and process descriptions for this OPLAN are contained in Annex A.

4.5.2 Tribal Coordination Requirements

There are 22 federally recognized tribes in the three-county northern California coastal region (see map in Annex B-3). Some have tribal lands or own property. There are a number of non-federally recognized tribes in the region as well. Within SEMS, tribal governments may coordinate their efforts and requests for resources through OA EOCs in their respective counties. Consequently, coordination with these tribes follows that of coordination with other local governments.

Tribal governments may also choose whether to make a request directly to the President for an emergency or major disaster declaration, or to receive assistance through a declaration for a state.

4.5.3 Nongovernmental Organization Coordination Requirements

NGOs are integrated into the joint state/federal Operations Section. They work with EF/ESF components based on their services and target populations and/or have a liaison at the JFO, with coordination managed by the UCG.

Some key NGO organizations and their roles are listed below.

- **National Donations Management Network (NDMN):** In California the NDMN assists state donations management efforts by coordinating donations and potentially sharing guidance or technical assistance on handling donations from other states as well as other countries. It also provides assistance with NDMN website issues and training, as requested. National Voluntary Organizations Active in Disaster (NVOAD) offers training on use of the NDMN portal.
- **American Red Cross (ARC):** The American Red Cross (national and local chapters) provides disaster assistance, including food (limited), shelter, bulk distribution of relief items, and emergency first aid care for responders and earthquake survivors. The ARC also provides blood products and supports family reunification effort using both direct and indirect methods (https://safeandwell.communityos.org/cms/).
- **Amateur Radio Emergency Services (ARES) and Ham Operators:** ARES and ham operators assist in disaster operations by establishing radio communications and internet connections in support of emergency response and reunification.
- **Community Emergency Response Teams (CERTs):** As a local resource, CERT members may be used in a number of support roles to augment emergency operations. Local jurisdictions maintain a listing of certified CERT members and provide training and equipment, where possible, to ensure operational readiness. CERTs activate within their respective neighborhoods to assist with assessments and surveillance, light SAR, basic first aid, and road/debris clearance, as requested. They provide some limited assistance and mental health support to traumatized individuals.
- **National Animal Rescue and Sheltering Coalition:** NARSC member organizations coordinate with local authorities to provide assistance for companion animals, horses, and farm animals in the aftermath of a catastrophic earthquake. (http://narsc.net/)
- **National Volunteer Organizations Active in Disaster (NVOAD):** NVOAD is the forum where volunteer organizations share knowledge and resources throughout the disaster cycle—preparedness, response, and recovery—to help disaster survivors and their communities. One role taken by members following a disaster is to help coordinate, receive, manage, and distribute donated goods and services. NVOAD also works with its member organizations to coordinate volunteer efforts. (http://www.nvoad.org)
- **Southern Baptist Disaster Relief and the Salvation Army:** These organizations provide assistance (staff and food) with feeding displaced individuals.

4.5.4 Private Sector Coordination Requirements

The private sector owns and operates the majority of critical infrastructure in the California Cascadia region. The role of the state/federal government in coordinating with the private sector during emergency response is to augment and support private sector response, as requested. The following are key private sector communications and coordination activities:

- The private sector collects and disseminates status updates on critical infrastructure operations, incident impact and consequences, and analysis and recommendations for restoring critical infrastructure.
- The private sector provides support through public-private partnerships, associations, and contractual agreements in responding to and recovering from natural disasters. Cal OES has signed MOUs with numerous private associations and businesses.
- Other state and federal departments and agencies have the lead for their sector specific critical infrastructure.

4.6 Key Decisions

Key federal FEMA Region decisions required after a catastrophic earthquake include the following:

- Recommendations to the President of the United States:
  - To declare an emergency or major disaster under the Stafford Act.
  - To appoint an individual to serve as Federal Coordinating Officer (FCO).
- Activation of the RRCC-RRCS staff and all ESFs.
- Development of the Regional Support Plan (RSP).
- Establishment of an IOF.
- Establishment of the UCG with Cal OES.
- Validation of SAs/FSAs for immediate push of resources in accordance with Annex D (Logistics Management and Resource Support).
- Prioritization of debris clearance at airfields and ports for search and rescue, evacuation, and supply operations with Cal OES.
- Prioritization of resource allocation based on impacts and needs.
- Subsequent decisions on facility locations (IOF, JFO) and establishment, staffing, program priorities, resources, and demobilization of these facilities.

4.7 Critical Information Requirements

See Annex B.

5 Administration, Resources, and Funding

5.1 Administration

Local, state, and federal departments and agencies are responsible for managing financial activities for earthquake response operations within their established processes. Federal operations under the Stafford Act will be administered consistent with the Act and as described in Section 4 of the *Federal Interagency Response Plan - Earthquake* (March 2011). Administration includes the implementation of provisions that will control cost-share arrangements between the federal government and the State of California.

5.1.1 Financial Oversight

The Financial Management Support Annex to the NRF provides basic financial management guidance to all federal departments and agencies providing assistance for incidents that require a coordinated federal response.

5.1.2 Personnel Administrative Management Responsibilities

Emergency management and incident response activities require carefully managed resources (e.g., personnel, teams, facilities, equipment, accommodations, and/or supplies) to meet incident needs. Utilization of the standardized resource management concepts such as typing, taking inventories, organizing, and tracking will facilitate the dispatch, deployment, and recovery of resources before, during, and after an incident.

Resource management should be flexible and scalable in order to support any phase of the incident and be adaptable to changes. Efficient and effective deployment of resources requires that resource management concepts and principles be utilized in all phases of emergency management and incident response.

5.1.3 Personnel Augmentation

Each local, state, and federal department and agency possesses individual policies for personnel augmentation based upon their authorities, various policies, MOUs, and mutual aid agreements.

5.1.4 Personnel Training

Local, state, and federal departments and agencies must ensure that their employees who are engaged in incident response, recovery, and mitigation activities are able to perform in accordance with standard resource typing guidelines and operational requirements.

Personnel reporting for duty at the JFO should be fully trained in the appropriate incident management doctrine and procedures and be knowledgeable in the operations of the agency they represent. Upon arriving at the JFO, local, state, and federal department and agency representatives may be required to partake in training, such as ethics, equal employment opportunity, etc.

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6 Oversight, Coordinating Instructions, and Communications

6.1 Oversight

The UCG will exercise oversight of response operations for a CSZ earthquake and tsunami incident. Key oversight concepts related to earthquake response are covered under Section 6.3 of the *California Catastrophic Incident Base Plan CONOP*.

6.1.1 Field Level Response

At the field response level, emergency response personnel and resources, under the command of an appropriate authority, carry out tactical decisions and activities in direct response to the event. In general, the Incident Commander is a local government official, although other entities may have specific authority to assume that role (e.g., CHP assumes Incident Command for hazardous materials incidents on state highways.) A Unified Command or Area Command may be formed, depending on the specific circumstances of the incident.

6.1.2 Local Governments

Local governments include cities, counties, and special districts. Local governments are responsible for the management and coordination of the emergency response and recovery activities within their jurisdictions. State entities, such as Humboldt State University, also have responsibility for managing and coordinating the overall emergency response and recovery activities within their jurisdictions. Tribal entities function as local governments within SEMS.

6.2 Coordinating Instructions

Cal OES and FEMA have the authority to initiate or execute this OPLAN jointly, under direction of the Governor of the State of California and the FEMA Regional Administrator. The UCG, when established, will support incident response activities and oversee establishment of the JFO.

6.3 Communications

Information concerning communications systems can be found in Annex E.

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7 Plan Maintenance

Cal OES and FEMA will evaluate the CSZ OPLAN every 5 years and modify the plan as necessary, based on changes in laws, regulations, policies, state or federal systems or procedural updates, and after-action reports and lessons learned from major activations or exercises. FEMA and Cal OES will distribute the revised document to the appropriate local, tribal, state, federal, and nongovernmental entities.

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ANNEX A: OPERATIONAL COORDINATION

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ANNEX B: INTELLIGENCE

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ANNEX B: INTELLIGENCE
APPENDIX 1: SITUATIONAL ASSESSMENT

B.1.1 Situation

Based on historical data, modeling, and simulation, a magnitude (M) 9.0 Cascadia Subduction Zone (CSZ) earthquake off the coasts of northern California, Oregon, Washington, and British Columbia will be immediately devastating. Tsunami inundation and ground shaking will push widespread damage inland, resulting in high numbers of potential fatalities, hospitalizations, evacuees, and destroyed buildings and a long list of cascading affects within the entire northern California region and surrounding states, including possible severe long-term economic impacts. Conventional response efforts and capabilities will be quickly overwhelmed.

In the face of such a challenge, the sharing of information among responders and the development of an accurate common understanding of the situation is crucial. Such understanding is the only way to enable senior leaders to properly assess risks, establish priorities, and apply their capabilities to provide maximum benefit to survivors. Situational awareness also facilitates timely and knowledgeable information sharing with senior officials, the public, and the media. Finally, good intelligence is essential to anticipating downstream requirements and establishing the stabilization that enables recovery.

Purpose

The purpose of this appendix is to outline information collection and awareness strategies for establishing situational awareness regarding the operational impacts caused by a catastrophic CSZ event, the availability of local resources, and the potential access points, routes, and sites for deployment, transport, and staging of external resource support.

B.1.2 Mission

The mission of the Situational Assessment Core Capability is to collect vital information, assess the fidelity and reliability of information supplied, analyze priorities, and share information among decision makers and Whole Community responders to expedite effective response operations.

The mission of the unified state/federal organization for gaining effective situational awareness is to immediately activate and employ all available technical and organizational resources to provide a common operating picture (COP) that facilitates decision making and critical information sharing among all levels of government and the private sector. Situational status information will be integrated from all sources, including from survivors, first responders, and the public as well as from the mass media and the Internet.

B.1.3 Execution

B.1.3.1 Concept of Operations

B.1.3.1.1 Critical Information Requirements

Following an earthquake and tsunami event, the National Response Coordination Center (NRCC) and the Regional Response Coordination Center (RRCC) are expected to publish a list of general Critical Information Requirements (CIR) regarding the incident. Additionally, the Unified Coordination Group (UCG) will develop and publicize incident-supporting CIR. CIR elements include:

(a) Status and location of operational nodes at the local, state, and federal levels.

(b) Locations and operational status of health care facilities.

(c) Status of prioritized ground routes.

(d) Air operations nodes and airspace control systems/processes.

(e) Status of stocks of supplies at logistics hubs, including Incident Support Bases (ISBs), federal staging areas (FSAs), staging areas (SAs), and Points of Distribution (PODs).

B.1.3.1.2 Essential Elements of Information

Essential Elements of Information (EEI) are critical pieces of information regarding the event and the environment needed by responding agencies by a particular time to integrate with other available intelligence to assist response agency decision making and management of response operations. EEI and the corresponding roles and responsibilities of participating agencies are detailed in Appendix 2 to Annex B – Incident Information Collection Plan.

EEI reflect a detailed listing of information needs that comprise the generalized CIR list and include:

Disaster Area EEI:

- Boundaries of the disaster area
- Access points to the disaster area
- Jurisdictional boundaries
- Social, economic, and political impacts
- Hazard-specific information
- Seismic and/or other geophysical information
- Weather conditions and forecasts

- Historic and demographic information

Assessment EEI:

- Predictive modeling impact projections
- Initial needs and damage assessments
- Status of communications systems
- Status of transportation systems and critical transportation facilities
- Status of operating facilities
- Status of critical facilities and distribution systems
- Status of energy systems
- Status of critical resources and resource shortfalls

Response and Recovery EEI:

- Status of emergency or disaster declarations
- State Emergency Function (EF)/federal Emergency Support Function (ESF) activations
- Major issues/activities of ESFs, EFs, and other functional areas
- Key state and federal personnel and organizations
- Remote sensing activities
- Federal Coordinating Officer (FCO)/State Coordinating Officer (SCO) priorities
- Recovery program statistics
- Donations and volunteers
- Status of upcoming activities and events
- Status of efforts under other federal emergency plans and authorities

B.1.3.1.3 Common Operating Picture

Development and employment of a Common Operating Picture (COP) requires the collection, validation, and sharing of critical incident information across all levels of responders and government. A COP facilitates collaborative planning and assists all echelons to achieve situational awareness. Situational awareness accuracy is critical to good decision making, rapid staff action, coordination of effort, effective execution, and collaborative end state achievement.

An effective COP meets the following parameters:

- Is accessible to all levels of responding agencies.
- Provides the capability for critical information to be shared across domains.

- Provides for a shared understanding of the incident, its objectives, and actions.
- Facilitates timely, risk-mitigated decision making.

Challenges for a COP are inherent in the simultaneous information collection activities of both national-level response agencies as well as by incident-level responders. Information sharing between incident commanders and regional/national response agencies is therefore critical to achieving an enhanced understanding of the event and the creation of an actionable response strategy.

B.1.3.1.4 Information Collection Plan

All responding agencies are responsible for providing critical event information for collection, validation, processing, organizing, and dissemination. Much of the data collected should be directed by incident leadership, based upon the identified EEI and CIR.

Appendix 2 (Incident Information Collection Plan) details agency responsibilities with respect to information collection.

B.1.3.1.5 Situational Awareness

Situational Awareness is the ability to identify, comprehend, and process high priority information about the incident and its impacts in affected areas as it relates to CIR and the mission of the response organization. The sustained knowledge of current and potential conditions, possible impacts on populations and infrastructure, and other key indicators of the situation will shape the direction and effectiveness of response operations.

Situational awareness requires continuous monitoring of relevant sources of information regarding actual and developing incidents. All response partners must support the COP philosophy and synchronize their response operations and resources. Local, state, state, and federal government emergency operations centers (EOCs) will monitor events and provide situational awareness. The EOCs will directly coordinate with nongovernmental organizations (NGOs) and private sector partners at appropriate levels for information sharing.

All appropriate and available information sources will be utilized to contribute to situational awareness. Public health officials, public works managers, educational leaders, remote sensing capabilities, agricultural specialists, social media, first responders, and nontraditional sources are included in the information gathering process.

The primary federal source of scientific information and expertise on earthquake impacts is the United States Geological Survey (USGS) and its National Earthquake Information Center. The USGS provides the earliest analytical information following a catastrophic earthquake in the form of immediate near real-time prediction reports (based on Hazards United States-Multi Hazards [HAZUS-MH] computer modeling using the Prompt Assessment of Global Earthquakes for Response [PAGER] program) that will provide

increasing levels of detail of the event and predicted impacts as informational reports become available.

For tsunami scientific information, the National Oceanic and Atmosphere Administration (NOAA), together with the USGS, provides detailed tsunami information using remote sensing data. The USGS and NOAA's National Ocean Service are responsible for providing ocean bathymetry, coastline details, and regional topography. NOAA monitors sea heights through a network of buoys and tide gauges (NOAA Research/Pacific Marine Environmental Laboratory, NOAA Weather Service/National Data Buoy Center, and NOAA National Ocean Service). NOAA Tsunami Warning Centers use observations of seismic activity and sea heights with forecast models to issue Tsunami Watches and Warnings, where appropriate.

A DHS Protective Security Advisor (PSA) is stationed in California to work with local, state, federal, and private sector partners collecting critical infrastructure data; analyzing, prioritizing, and reducing risk; and building resiliency for 18 Critical Infrastructure and Key Resources (CIKR) sectors. This individual may serve as an Infrastructure Liaison in a CSZ activation.

B.1.3.1.6 Reports

Information is collected and disseminated through various reports generated by federal departments and agencies; local, state, and tribal governments; nongovernmental organizations (NGOs); and the private sector. The RRCC and Joint Field Office (JFO) will generate standard information products for dissemination such as situation reports (SITREPs), Region Support Plans (RSPs) and fact sheets. The NRCC, RRCC, JFO, and the state will use WebEOC and the Homeland Security Information Network (HISN) for information sharing.

B.1.3.1.7 Phased Approach

The focus of the CSZ planning effort is on stabilizing the catastrophic effects of a CSZ earthquake and tsunami event in the northern California coastal region during the first 72 hours following the incident.

Planning efforts revolve around three distinct phases: Phase 1 – Normal Operations, Phase 2 – Response, and Phase 3 – Long Term Recovery. For this response plan, the focus is on Phase 1 (Normal Operations) and Phase 2 (Response). Phase 2 progresses through three response sub-phases for a period that roughly covers the first 72 hours post-event and leads towards incident stabilization.

B.1.3.2 Tasks by Phase

B.1.3.2.1 PHASE 1: Normal Operations

PURPOSE: To coordinate with local, state, and federal partners to ensure plans and systems are updated, exercised, and viable prior to an incident.

Key Situational Assessment activities in Phase 1 include the development of information-sharing rules of engagement and accepted practices to enable maximum use of all systems to receive, evaluate, coordinate, and disseminate multi-modal information that ensures the establishing of an accurate COP. Public partners from all strata of government will engage emerging technologies to assess and identify capabilities that will facilitate critical information sharing and situational awareness between all levels of government and between agencies and organizations.

END STATE: A no-notice CSZ incident of significance (~ M 9.0) will mark the end of Phase 1.

LOCAL

- Refine plans that include situational assessment requirements and expectations.
- Identify locations for primary and alternate EOCs where catastrophic incident situational assessment information streams will be fused into a COP.
- Exercise plans and procedures with Whole Community partners.
- Procure and integrate interoperable and redundant systems for local COP development.

STATE

California Office of Emergency Services (Cal OES)

- Develop catastrophic incident plans with defined assessment indicators.
- Coordinate a standardized multi-agency COP that serves as the official state situational assessment.
- Develop and share Geographic Information Systems (GIS) products with local jurisdictions and state agencies.
- Coordinate situational assessment procedures with Whole Community partners.
- Codify authoritative pre-identified areas of interest along with means of observation from local and state organizations and the private sector.

CA National Guard (CNG)

- Coordinate probable operations with state and federal partners.
- Ready systems to conduct immediate area assessments following an incident.
- Synchronize desired disposition of capabilities for a catastrophic response.
- Prepare to establish a dual-status headquarters that is staffed and equipped to integrate national information awareness and assessment assets.
- Participate in local, state, and federal exercises.

Caltrans

- Update and maintain GIS assessments for state and federal ground routes.

- Conduct assessments of at-risk primary routes into affected areas in order to identify probable obstructions and structural failures.
- Support airport runway safety inspections with along with local agencies.

FEDERAL

FEMA

- In conjunction with the state, develop and implement plans that anticipate local support requests.
- Develop and conduct scalable validation exercises in partnership with Whole Community partners.

USGS

- Develop and implement plans to rapidly deliver technical assessments following a CSZ incident.

NOAA

- Continuously monitor and analyze data from sea-level and seismic networks in order to issue timely tsunami notifications during an event.
- Support community tsunami preparedness efforts by running the TsunamiReady program and developing exercises and drills for other governmental organizations.

US Department of Defense (DoD)

- Develop and implement plans that anticipate local support requests in conjunction with the state and validated by FEMA Region IX; expedite jurisdictional waivers.
- Participate in planning and exercises along with federal and military partners.

US Department of Health and Human Services (HHS)

- Develop and implement plans that anticipate local and tribal support requests in conjunction with the state.
- Expedite jurisdictional waivers.

US Department of Agriculture (USDA)

- Prepare to provide GIS teams and assessments.

TRIBAL

- Participate in exercises with public partners, as possible.
- Determine assessments necessary for decision making.

NONGOVERNMENTAL/PRIVATE SECTOR ORGANIZATIONS

Private Sector

- Participate in exercises with public partners as available.
- Develop assessment tools (GIS), resources, and networks to be made available at the time of incident, with appropriate partners.

NGOs

- Participate in exercises with public partners, as available.
- Prepare to contribute to and receive assessments from government partners.

B.1.3.2.2 PHASE 2A: Activation (Immediate Response) (I + 12 hours)

PURPOSE: To engage established situational assessment systems and exploit emerging intelligence to accurately develop a COP that enables effective decision making at all levels (including the Unified Coordination Group [UCG]) and the employment of the response resources necessary for saving and sustaining lives and protecting property.

Primary Situational Assessment activities within this phase include receipt and evaluation of information that results in the delivery of appropriate and necessary information and warnings at all levels and an assessment of the size and scope of the incident at the local, tribal, state, and federal levels.

END STATE: Initial incident assessments and intelligence gathering allows for a defined way forward, as prioritized and directed by the UCG.

LOCAL

- Activate EOCs.
- Regain contact with state and regional partners.
- Compile community assessments and submit a composite assessment to the state.

STATE

Cal OES

- Regain contact with affected jurisdictions.
- Conduct initial damage assessments and gain situational awareness from USGS, USCG, DoD, NGA, NOAA, California Department of Transportation (Caltrans), and the California Highway Patrol (CHP).
- Consolidate local and agency assessments to craft a COP.
- Activate California Civil Air Patrol (CAP) assets in accordance with standing memorandum of understanding (MOU) to conduct initial damage assessments.
- Document the disposition of resources throughout the state.

- Direct the implementation of pre-identified assessment mission tasks for state agencies.
- Monitor traditional media, social media, volunteer groups, and private industry to provide a complete assessment and begin validating information.

CNG

- Immediately conduct area reconnaissance of prioritized routes in and around affected areas.
- Request activation of Dual Status Headquarters authority and supporting staff.

Caltrans

- Provide assessment of ground routes into and around affected areas.

FEDERAL

FEMA

- Activate NRCC and RRCC (RRCS).
- Deploy ESFs to RRCC.
- Deploy state liaisons and Incident Management Assessment Teams (IMATs), as requested/required.
- Provide assessments of the disposition and status of federal assets.
- Monitor other federal agencies, traditional media, social media, volunteer groups, and private industry in order to prepare a complete situational assessment.
- Coordinate federal agency situational assessment contributions.
- Establish a federal COP that is harmonized with the state COP.

USGS

- Deliver PAGER alert message.
- Provide Shake Maps containing technical data and damage estimates.

NOAA

- Issue initial tsunami alerts via the Emergency Alert System (EAS), NOAA Weather Radio-All Hazards (NWR), and all other standard National Weather Services (NWS) output mechanisms based on real-time processing of seismic data.
- Provide decision support services from coastal Weather Forecast Offices (WFOs) and Tsunami Warning Centers to local, state, and federal emergency management agencies, the US Coast Guard (USCG), and the military.
- Monitor sea-level network and forecast tsunami impacts after the initial alert.
- Cancel tsunami alerts when danger levels have decreased.

DoD

- Anticipate mission assignments.
- Seek appropriate waivers required to support local and state Information Awareness and Assessment (IAA) gaps in a timely fashion.

HHS

- Deploy and employ life-saving medical resources.

NASA

- Provide remote sensing capability.

B.1.3.2.3 PHASE 2B: Deployment and Employment (I + 12-72 hours)

PURPOSE: To provide the necessary situational understanding and awareness for the effective staging and employment of required and ready capabilities.

Primary Situational Assessment activities within this phase focus upon the expansion of the COP, while rapidly providing situational awareness to affected areas and Whole Community partners to facilitate coordinated response activities.

END STATE: Information collection and intelligence gathering is up and running and enabling near real-time situational awareness.

LOCAL

- Continue to conduct response operations, as possible.
- Update and share local assessments with the state.
- Identify and prioritize information requirements.
- Distribute informational updates by all means available.

STATE

Cal OES

- In coordination with other state agencies and FEMA, establish and share a state COP with affected areas as well as tribal, federal, and Whole Community partners.
- Document the assessment and utilization of pre-established Continuity of Operations (COOP), POD, and mass care shelter sites as well as transportation systems.

CNG

- Deploy additional resources as mission tasked.
- Conduct reconnaissance as directed and in conjunction with other support missions.

- Produce and deliver situational assessments in support of other state agencies.

Caltrans

- Update and monitor ground routes assessments; develop and share an authoritative transportation mobility status report.

CaliforniaVolunteers

- Track movement and distribution of volunteers.
- Identify volunteer information requirements.

FEDERAL

FEMA

- Establish and share a federal COP.

NOAA

- Continue tsunami monitoring.
- Continue monitoring of aftershocks and sea levels; deliver tsunami alerts as necessary.
- Provide decision-making support from coastal WFOs and Tsunami Warning Centers to local, state, tribal, and federal emergency management agencies; provide "All Clear" messages when appropriate.

DoD

- Continue to anticipate and prepare to deploy appropriate IAA resources.
- Deploy operational staff to facilitate a dual-status headquarters in coordination with the CNG and Defense Coordinating Officer/Defense Coordinating Element (DCO/DCE).

B.1.3.2.4 PHASE 2C: Sustained Response (I + 72+ hours)

PURPOSE: To standardize management of the COP through the establishment of operational periods and the scheduled compiling, validating, and dissemination of information.

Primary Situational Assessment activities within Phase 2C include establishment of dynamic systems for sharing necessary information in order to maintain an accurate COP that facilitates sustained operations.

END STATE: Information collection and intelligence gathering is up and running, enabling real time situational awareness.

LOCAL

- Continue to provide prioritized local assessments; request additional resources as required.
- Continue to share credible and necessary information with local populations through available redundant means.
- Receive and incorporate state/federal resources to develop a multi-echeloned COP.

STATE

Cal OES

- In coordination with other state agencies and FEMA, share COP with affected Operational Areas (OAs) and Whole Community partners.
- Document the assessment and utilization of pre-established COOP, POD, and mass care shelter sites as well as transportation systems.
- Establish operational periods for ongoing operations and advanced planning.
- Transition operational focus from life-saving to life-sustaining activities, with an emphasis upon transport of food, water, and other necessities.

CNG

- Deploy additional resources as mission tasked.
- Produce and deliver situational assessments in support of other state agencies.

CaliforniaVolunteers

- Track the movement and distribution of volunteers.
- Identify volunteer information requirements.

FEDERAL

FEMA

- Continue to share COP.
- Coordinate with state, private sector, and nongovernmental partners.

USGS

- Continue to deliver technical assessments and warnings.

NOAA

- Continue to monitor aftershocks and sea-level changes; deliver tsunami alerts as necessary.

DoD

- Provide appropriate incident and awareness resources as requested by FEMA.
- Provide GIS teams and assessments.

USDA

- Provide GIS teams and assessments.

Environmental Protection Agency (EPA)

- Provide GIS teams.
- Provide assessments of impacts and risks.

US Department of Transportation (DOT)

- Provide GIS teams.
- Provide assessments of impacts and risks to airports and road networks.

HHS

- Provide GIS teams.
- Provide health assessments along with impacts and risks.

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ANNEX B: INTELLIGENCE
APPENDIX 2: INCIDENT INFORMATION COLLECTION PLAN

This appendix contains the Information Collection Plan (ICP) that will guide the Regional Response Coordination Center's (RRCC's) information gathering and reporting efforts in a Cascadia earthquake and tsunami response. The RRCC's Planning Section is responsible for maintaining the ICP and adapting it to emergent needs during the response phase.

Disaster Area EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/ Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Characteristics of Seismic Disaster	• Magnitude • Date/time • Location • Depth • Distances (from known cities towns)	USGS: http://earthquake.usgs.gov/	ESF #5	• Situation Report	Immediately.	All Hands
Tsunami Warnings and Advisories	• What areas are under warnings or advisories • Expected size of the wave • When it is expected to arrive	• West Coast and Alaska Tsunami Warning Center Bulletins • Pacific Tsunami Warning Center Bulletins	ESF #5	• Text messages of watches, warnings, and advisories • GIS products	As soon as possible after event.	All Hands

Disaster Area EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/ Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Boundaries of Disaster Area	• Geographic locations sustaining damage • Description of extent of damage sustained • Boundaries of areas evacuated • Estimated % of population evacuated • Estimated % of population unable to return *Polygons/files created for development of GIS maps by one GIS unit that can be used by other GIS units. **All remote sensing imagery or derived maps.	• Predictive modeling • Geospatial Intelligence System (GIS) • Remote sensing/aerial reconnaissance • Assessment teams • Community relations reports • State Liaison/IMAT/FCO reports • News media and other open sources • State • Internet • GPS *FEMA GIS (MAC, RRCC, DFO) **Remote sensing/aerial recon	ESF #5	• Summary of Impacts map • Situation Report • Status Briefing • Daily Intelligence Summary *MapInfo files of polygons and layers **.jpg files, posted to NEMIS or Internet.	Initial estimate NLT 12 hours following earthquake.	GIS, IMAT, All Hands
Boundaries of Secondary Disaster Areas (flooding, tsunami, fires)	Same as above	Same as above	ESF #5	Same as above	Same as above.	GIS, IMAT, All Hands
Access Points to Disaster Area	• Where access points are located • What credentials are needed to pass • What are best routes to access the disaster area	• Cal OES • California Highway Patrol • Caltrans • ESF-#1 reports	ESF #1	• Special briefings • Displays • GIS products	Initial information NLT 6 hours following event. Updated every 6 hours until stabilized.	GIS, IMAT, All Hands
Jurisdictional Boundaries	• List of jurisdictions (cities, counties) affected, with maps • Tribal nations affected • Political and congressional jurisdictions affected	• Existing maps • GIS database	ESF #5	• GIS maps • Jurisdictional profiles • Political profiles • Congressional jurisdiction boundaries	NLT 8 hours following event.	GIS, IMAT, All Hands

Disaster Area EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/ Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Socioeconomic/ Political Impacts	• Number of homes affected • Potential/estimated population affected • Estimated population affected with access and functional needs (AFN) • Number of shelters open/sheltered population numbers • Number and type of businesses affected • Status of local government operations (including police, fire services, and EMS) • Potential shelter requirements	• Predictive modeling • Geographic Information System (GIS) • Remote sensing/aerial reconnaissance • Assessment teams • Community Relations reports • IMAT/AIR/FCO reports • News media and other open sources	ESF #6	• Situation Reports • Status Briefings • Impact summary maps • Daily Intelligence Summaries	Initial estimate NLT 12 hours following earthquake.	
Socioeconomic Impacts	• Number of shelters open/sheltered population numbers • Estimated shelter population with AFN • Potential shelter requirements	• VOLAG reports • Cal OES reports • ESF #6 reports	Operations EF17	• NEMIS IAM reporting • Situation Briefings • Situation Reports • Displays • GIS products	Initial estimate NLT 12 hours following event. Updated every O-Period.	
Sociopolitical Impacts	• Congressional districts impacted	• Existing maps • Congressional directories • GIS databases • BIA information	Congressional Affairs	• Jurisdictional profiles • GIS products	NLT 24 hours following event.	
Sociopolitical Impacts	• Tribal nation impacts	• Existing maps • Census data • BIA	Tribal Liaison	• Jurisdictional profiles • Fact sheets • GIS products	NLT 24 hours following event.	

Disaster Area EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/ Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Hazard-Specific Information	• Potential for tsunami/ancillary events • Extent of fire(s) • Potential for (or extent of) flooding • Number/estimate of collapsed structures potentially requiring Urban Search & Rescue (US&R) • Potential for release of hazmat • Potential/actual damage/failures • Potential for aftershocks • Potential for landslides or other hazards • Location of epicenter • Magnitude of event	• US Geological Survey • National Weather Service • USACE • USAR • NOAA • Tsunami Warning Center	ESF #5	• GIS products depicting actual or potential threats.	Ongoing.	
Hazard-Specific Information	• Size of tsunami • Distance it is expected to travel inland • Time it will arrive • When will updated information be available • Actions being recommended	• West Coast and Alaska Tsunami Warning Center Bulletins • Pacific Tsunami Warning Center Bulletins • NOAA • USGS • Cal OES	ESF #5	• GIS Products • Situation Briefings • Situation Reports	As soon as information is available.	
Weather	• Weather forecasts post-event and implications for weather to hinder operations	• National Weather Service	ESF #5	• Weather reports included in Status Briefings, Situation Reports, Daily Intelligence Summaries, and Action Plans, or upon request	Ongoing.	
Seismic and Other Geophysical Information	• Causative earthquake location • Earthquake magnitude • Determination of whether tsunami was a result of a landslide and, if so, where the landslide was located • Rivers and waterways that will have upstream impacts	• USGS • West Coast and Alaska Tsunami Warning Center Bulletins • Pacific Tsunami Warning Center Bulletins • NOAA • Cal OES	ESF #5	• GIS Products • Situation Briefings • Situation Reports	As soon as information is available.	

Disaster Area EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/ Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Historical Information	• Information on whether previous events of similar magnitude have affected the area • What the results were • What resources the federal government provided • What were the major operational problems • Other critical issues	• After-Action Reports • Situation Reports • Other archived information • Mitigation Directorate (through Mapping and Analysis Center) • Other federal agencies • USGS/NEIC	ESF #5	• Daily Intelligence Summary • Verbal briefings • Special Reports/ analyses ***GIS products***	NLT 24 hours following event.	
Demographics	• Population of impacted areas, including disability/AFN estimates • Demographic breakdown of population, including income levels • Number/type of housing units in impacted areas • Levels of insurance coverage	• Geographic Information Systems (GIS) • Predictive modeling • Commercial products	ESF #5	• Jurisdiction profiles • GIS analysis	NLT 12 hours following event.	

Assessment EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Predictive Modeling	• Predictive models available • What is best model to use • Who will interpret the results • Who will coordinate the modeling and data input	• NOAA • USGS • MAC • DoD/U.S. Navy	ESF #5/Mapping & Analysis Center	• GIS products and interpretations	NLT 2 hours following event.	
Initial Needs and Damage Assessments	• Status and reporting of RNA and PDA Teams • Damages reported by the state and other OFAs • Requests for federal support that have been received from the state	• RNA/PDA Team reports • HAZUS outputs • Open sources • OFA Situation Reports • Cal OES • State Liaisons	Operations	• Situation Briefings • Situation Reports • GIS products	Initial reports NLT 4 hours after event. Updated every 6 hours.	

Assessment EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Status of Communications Capabilities	• Status of telecommunications services (including Internet and video relay services [VRS]) and infrastructure, including towers • Reliability of cellular service in areas affected • Potential requirement for radio/satellite communications capability • Status of emergency broadcast (TV, radio, cable) system and ability to disseminate information	• State Liaison/IMAT/FCO • ESF 2 • News media/open sources • Telephone companies • NCS member agencies • LECMAP system	ESF #2/NCS	• Input for situation report and/or verbal report • NCS Situation Report	Initial report NLT 4 hours following event. Updated every 6 hours.	
Status of Transportation Systems	• Status of area airports • Status of major/primary roads • Status of critical bridges • Status of railways • Status of ports • Status of evacuation routes • Status of public transit systems • Status of pipelines • Accessibility status within most severely impacted areas • Determination of whether debris is a major impact to major roadways and bridges	• State Liaison/IMAT/FCO Reports • Caltrans • ESF 1/DOT • Assessment Team Reports • Community Relations • USACE • Remote sensing/aerial predictive modeling	ESF #1	• Input for situation report and/or verbal report • DOT Situation Report • GIS products	Initial report/estimate on airports within 1 to 6 hours following event (NLT 12 hours following event).	
Status of Emergency Operations Centers	• Status of local EOCs • Status of state EOC • Status of agency EOCs • Location and status of federal facilities established • Status of RRCC and COOP sites • Status of the EST • Status of backup FEMA Region • Status of adjoining Regional RRCCs • Status of the MOC	• State Liaison/IMAT/FCO • ESFs/other federal agencies • Regional offices • RRCC • Initial Operating Facility Reports	Operations, ESF #5	• Operations Section input to situation report and/or verbal reports • Situation displays • Fact sheets • GIS status maps and products	NLT 1 hour following earthquake. Updated every 6 hours.	

Assessment EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Status of Critical Infrastructure and Facilities	• Status of potable and nonpotable water and sewage treatment plants/distribution systems • Status of electrical power generation and distribution • Status of medical facilities (hospitals/nursing homes) • Status of schools and other public buildings • Status of fire and police facilities • Status of USACE projects and dams • Status of landfill and solid waste removal systems	• Predictive models • Remote sensing/aerial reconnaissance • State Liaison/IMAT/FCO • RRCC • ESF #3/USACE • ESF #8/PHS • ESF #12/DOE • GIS • GPS networks	Operations USGS, EROS	• ESFs #3, #8, and #12 inputs to the situation report and/or verbal reports • USACE, PHS, and DOE Situation Reports • GIS products	NLT 24 hours following earthquake. Depending on damage and information collection capability, some data may require more than 12 hours for collection.	
Status of Energy Systems	• Status of electrical-generating facilities • Status of distribution grid • Number of people without electric power • Status of natural gas transmission facilities • Status of gas distribution pipelines • Number of people without natural gas • Status of gasoline and oil distribution systems	• Electric Reliability Council • DOE reports • State public system reports • NRC reports • CUEA reports	ESF #12	• Situation Briefings • Situation Report inputs • GIS products	NLT 12 hour after event. Updated daily.	
Resource Shortfalls	• Actual or potential state resource shortfalls • Anticipated requirements for federal resources • Potential or actual federal shortfalls • Potential sources for filling resource shortfalls • Resources available and locations of those resources • Priorities for water, food, power, medical, heat, communications	• State EMS • RRCC • Assessment Team reports • Community Relations field reports • ESF reports • Response Resource and Sustainability Model	Operations	• Territorial Resource Center Inventories • Time-Phased Deployment lists • Status Briefings • Agency/ESF reports • Daily Intelligence Summaries	Initial estimate within 12 hours following event. Updated every 12 hours.	

Response and Recovery EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Status of Presidential Declarations	• Has a Presidential Declaration been made • Type of declaration • Which jurisdictions are included • Types of assistance are authorized • Any special cost-share provisions regarding Direct Federal Assistance • Whether PDAs are scheduled • Which jurisdictions will be assessed and in what order	• Notice of Disaster Declaration	ESF #5	• Disaster fact sheets • GIS products showing declared counties and types of assistance	Within 1 hour following official announcement.	
Status of Local/State Declarations	• Have local emergency declarations been issued and where • Information on whether the state has issued an emergency declaration	• Cal OES • State Liaison	Operations	• Situation Briefings • Situation Reports • NEMIS Reporting	As soon as information becomes available. Updated every 12 hours as long as necessary.	
Status of ESF Activations	• Which ESFs are activated	• Operations Section • RRCC • EST	Operations	• Operations Section input to situation report and/or verbal report • Mission Assignment lists	Within 3 hours of activation.	
Major Issues/Activities of ESFs/OFAs	• What operations and assessments are agencies conducting under their own authorities • What mission assignments have been issued • Status of Mission Assignments	• Mission Assignment logs • ESF/Agency situation reports • Functional plans • RRCC/IMAT	Operations ESF #5	• Situation Report • Displays • Action Plan	NLT 24 hours following event.	

Response and Recovery EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Status of Key Personnel	• Where the IMAT Team Leader is located • Who the designated FCO is and where he or she is currently located • Who is designated as the state Coordinating Officer and where he or she is located • Is a State Liaison deployed from the Region	• RRCC • Initial Operating Facility reports • State Liaison/IMAT/FCO	ESF #5	• Initial Operating Report • Disaster fact sheet	Within 4 hours following Disaster Declaration.	
Status of FEMA Response Personnel	• Information on any injuries to FEMA personnel • Have any FEMA personnel have been killed • How many FEMA personnel have been impacted by the event • What accessibility or other accommodations are needed for FEMA personnel • What are the staffing needs for response operations	• Administration reports • Cal OES • RRCC • MOC	Administration	• Special reports to FOC and senior management	As soon as Available	
Status of Reconnaissance Operations	• Remote sensing missions that have been requested and areas targeted • When data will be available • Whether a rapid assessment is being conducted • What areas are being assessed • When reports will be available • Has the Civilian Air Patrol (CAP) been activated • Information on where overflights are being conducted and when reports will be available/in what format • What other aerial reconnaissance missions are in progress • Commercial remote-sensing sources available	• State Liaison/IMAT/FCO • RRCC • Operations • Information and Planning • NGOs • USGS	ESF #5	• Remote sensing imagery-derived products	Ongoing.	

Response and Recovery EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Status of Remote Sensing Operations	• What remote sensing missions have been requested and what areas are targeted/when data will be available • Is a rapid assessment being conducted and areas being assessed/when reports will be available • Whether the Civilian Air Patrol (CAP) has been activated • Where overflights are being conducted and when reports will be available/in what format • What other aerial reconnaissance missions are in progress • Whether commercial remote-sensing sources are available	• State Liaison/IMAT/FCO • RRCC • Operations • Information and Planning • NGOs • USGS	ESF #5	• Remote sensing imagery-derived products	Ongoing.	
Priorities for Response	• Information on federal operational priorities	• FCO/IMAT Team Leader • RRCC	ESF #5	• Action Plan • Situation Report • Status Briefings	As established (initially daily).	
Priorities for Mitigation	• Lists of pre-approved mitigation projects in the declared disaster area • Information on whether the disaster has changed the cost/benefit of any pre-approved projects • Determinations as to whether repair costs are likely to be substantial (exceed 50% of structure value)	• NEMIS IA/PA data compared to disaster boundaries and remote sensing • Community Information System and model projections • Remote sensing • RRCC • PDA and/or inspection teams • Local Hazard Mitigation Plan (LHMP)	FEMA IT ESF #5 FIA	• Model-derived boundaries • GIS maps comparing locations of applicants with disaster boundaries and remote sensing	Initial report on COBR and non-NFIP immediately following earthquake. Remote sensing DEM and structure comparisons 48 hours after event.	
Recovery Program Statistics	• Statistics for the IA, PA, and HM programs • What trends are shown	• NEMIS reports	Operations	• Situation Briefings • Situation Reports	Every O-Period.	
Donations/ Voluntary Agency Activities	• Whether a Donations Hotline has been established or whether there is a need for a hotline • Which Voluntary Agencies are actively involved in operations	• VOLAG reports • Voluntary agencies • Agency/ESF reports • Cal OES VAL	Operations EF17	• Situation Report • Status Briefings	NLT 12 hours following event.	

Response and Recovery EEI						
Essential Element of Information	**Specific Information Required**	**Proposed Methodology/Sources**	**Responsible Elements**	**Deliverable**	**Collection Suspense**	**On Arrival Distribute to**
Upcoming Activities	• Schedule of daily meetings and briefings • Other significant events of activities planned or scheduled	• Federal Coordinating Officer • ERT-A Team Leader • RRCC Director • EST Director • State Coordinating Officer	ESF #5	• Daily meeting schedule	Ongoing.	
Status of Efforts Under Other Federal Emergency Plans and Authorities	• What ESFs are operating under their own authorities • Where their operations are based	• ESF-Situation Reports • Operations reports	Operations	• Situation Briefings • Situation Reports • Special briefings	Initial within 12 hours of event. Updated every O-Period.	
Status of State and Local Operations	• Information on local and state priorities • Major state operations that are underway in support of local jurisdictions • Support being received from other states under Emergency Management Assistance Compacts	• State Liaison/IMAT/FCO • Open sources • RRCC • Internet	Operations	• Operations Section input for Situation Reports • Status Briefings	NLT 6 hours following event.	
	• Personal safety issues • Whether personnel protection equipment is needed • Any known safety hazards in conducting operations	• Community Relations Field Reports • Assessment Team reports • State Liaison/ERT-A/FCO • Predictive modeling	Safety Officer	• Safety Briefings • Safety Messages	Initial Briefing NLT 12 hours following event.	
Hazardous, Toxics, and Radiological Issues	• Reported or suspected hazardous materials/toxic release incidents • Follow up actions planned or underway • Information on any actual or potential radiological incidents and locations • Follow up actions planned or underway	• State Liaison/IMAT/FCO • Lead Federal Agency (LFA) under the Federal Radiological Response Plan (FRERP) • Nuclear Regulatory Commission (NRC) • Remote sensing • Predictive modeling • GIS databases	Operations EF/ESF #10 EPA Cal/EPA EF #8, CDPH	• Status Briefings • Situation Reports • Flash Reports • GIS products	Initial report NLT 12 hours following event.	

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ANNEX B: INTELLIGENCE
APPENDIX 3: MAPS

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 1: CRITICAL TRANSPORTATION

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 2: PUBLIC INFORMATION AND WARNING

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ANNEX C-2: PUBLIC INFORMATION AND WARNING
TAB A – STATE PRE-SCRIPTED MESSAGES

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
Stay Clear	This is a special earthquake safety message from the California Office of Emergency Services. There's been a strong earthquake in our area and the danger may not be over. Stronger shaking is possible. Unless you believe the building you're in is unsafe, you are advised to stay inside. If shaking starts again, stay clear of windows and take cover under a sturdy piece of furniture or crouch near an inside wall. Cover your head and neck with your arms until the shaking stops. If an aftershock begins when you are outdoors, stay in the open and away from buildings, signs, and overhead wires. If you are in a tsunami hazard zone, wait for shaking to stop and immediately move inland or seek higher ground. Follow the instructions provided by emergency personnel, and monitor information sources for additional information. And stay tuned to this station for more information from the California Office of Emergency Services.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
Flashlights	This is a special safety message from the California Office of Emergency Services. A strong earthquake has hit the area. It is vital to your safety to check around you for damage, especially to utility lines and connections to appliances. If you smell smoke or hear or smell leaking gas, open your windows and get everyone out of the building right away. If you suspect a gas leak is occurring, do not touch or use electric light switches. Use flashlights only—never use matches, lighters, or candles, as a spark or open flame could start a fire or even cause an explosion. If the situation allows, check the survival guide section of your telephone book for more helpful information. And stay tuned into this station for more information from the California Office of Emergency Services.
First Steps At Home	This is a special safety message from the California Office of Emergency Services. A strong earthquake has hit the area. If you're at home, these are the first steps to take: • Check on the location and status of your family members. • Use a fire extinguisher to put out small fires. Never use water on electrical or gas fires. If a fire can't be controlled quickly, evacuate the building right away. • Check for gas leaks. If you smell or hear gas, open the windows and move everyone outside. • Look and listen for any signs of possible collapse by inspecting your home's foundation, walls and chimney. If your home is in a tsunami hazard zone, do not return to the area until emergency officials indicate it is safe to do so. And stay tuned to this station for information from the California Office of Emergency Services.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
Second Steps At Home	This is a special safety message from the California Office of Emergency Services. If you're in a safe place right now, stay there! The earthquake danger may not be over yet and strong aftershocks are possible. In addition: • If you are at home and there are no immediate signs of building collapse, fires, or gas leaks, begin to check all your utility connections. • Turn off any appliance that was on when the earthquake hit and check it for damage. • Check your water heater. If the earthquake caused it to fall over it may have broken a gas, electric, or water line. • If your utilities appear damaged, turn them off at the main meter. Stay tuned to this station for more information from the California Office of Emergency Services.
More Steps At Home	This is a special safety message from the California Office of Emergency Services. Although earthquake shaking may have stopped, strong aftershocks are still possible in the area. If you are safe where you are, remain there and do the following: • Help the people around you….your family, neighbors and coworkers. • Read the first aid and safety tips in the front of your telephone directory. • Clean up flammable liquids and other hazardous materials. • Keep an eye out for any fires that might ignite. If you must move from your current location, leave a note on the front door of your home to alert family and emergency workers about where you have gone. Stay tuned to this station for more information from the California Office of Emergency Services.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
On The Road	This is a special safety message from the California Office of Emergency Services. An earthquake has hit the area and stronger shaking could follow. If you are in a tsunami hazard zone and have felt an earthquake, immediately move inland or seek higher ground. If roads or bridges are damaged, or there is heavy traffic, leave the area on foot. It's safer to not drive on roads right now…but if you must drive and another earthquake strikes, pull over and stop at the first open, safe place you can find. Avoid all underpasses, power lines, and overhanging signs. If stopped and in a safe location away from hazards, stay inside your car. If driving on a bridge or an overpass, carefully continue moving until you're off the bridge….then look for a safe, open place to stop until the shaking passes. Stay tuned to this station for more information from the California Office of Emergency Services.
People Check	This is a special safety message from the California Office of Emergency Services. Police, firefighters and medics are currently dealing with the most urgent problems, so the best source of help for your family, friends, and neighbors right now is you! If your area has suffered damage, check on other people nearby….your family, neighbors, or co-workers. Use the first aid information in the front of your telephone book to find out how to treat any injuries. Small children and seniors will need special attention and reassurance, even if they seem OK. People with access and functional needs may also need extra help. Stay tuned to this station for more information from the California Office of Emergency Services.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
Food	This is a special safety message from the California Office of Emergency Services. Following an earthquake, a hot meal can help everyone feel calmer. It's never too early to start feeding people, but plan your meals carefully. If your power is out, eat any perishable foods in your refrigerator first….then the food from your freezer. Leave the food that is stored on your shelves for last. Unless you are sure your gas and electric connections are safe, cook outside on a barbecue, a charcoal grill, or a camping stove. (Remember to use grills outdoors only.) Read the helpful information in the Survival Guide section near the front of your telephone directory. And stay tuned to this station for more information from the California Office of Emergency Services.
Water Storage	This is a special safety message from the California Office of Emergency Services. If your neighborhood has suffered earthquake damage, try to store water now for later use. Start by filling your bathtub and any other large containers. If your water heater is undamaged, the water inside may be needed later for drinking and cooking. If the water in the storage tank of your toilet is clear, it may be usable, but don't ever use water from the bowl. Prepare to disinfect any water that isn't bottled. You can disinfect water by boiling it for one minute at a rolling boil….or by adding eight (8) drops (1/8 teaspoon) of fresh, unscented household laundry bleach per gallon of clear water; or 16 drops (1/4 teaspoon) per gallon of cloudy water, mix thoroughly and allow to stand for 30 minutes before using. A chlorine-like taste and odor will result and is an indication of adequate disinfection. Stay tuned to this station for more information from the California Office of Emergency Services.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
No Phones	This is a special safety message from the California Office of Emergency Services. There's been a large earthquake in the area and strong shaking from aftershocks is still possible. Local police and fire departments are aware of the situation and are busy responding to the most serious problems first. Please do not make telephone calls…including cell phone calls…unless you need to report a life-threatening injury or fire. Unnecessary calls could keep life-saving calls from getting through for those most in need. Do not text emergency responders through 911; they cannot receive text messaging. Look in the front pages of your telephone directory for emergency survival guidance tips. And stay tuned to this station for more information from the California Office of Emergency Services.
Checklist – To Do's	This is a special safety message from the California Office of Emergency Services. If the earthquake has damaged homes, roads, or other facilities in your neighborhood, here are some things to do: • Stay calm and reach out to people around you. • Stay off the telephone. • Put on sturdy shoes. • Store water in a bathtub or large container and sterilize any water that is not bottled. • Turn off leaking gas and damaged electric utilities at the meters. • Clean up broken glass, medicines, and flammable liquids. • Also, every hour or so, take a few moments to rest and think about what you are going to do next. And be sure to stay tuned to this station for more information from the California Office of Emergency Services.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
Checklist – Don'ts	This is a special safety message from the California Office of Emergency Services. If homes and facilities have been damaged in your neighborhood, here things you should not do: • Do not turn off your gas at the meter unless you actually smell gas or see smoke. If you do turn off your gas, don't turn it back on again. Wait for utility service technicians to help you. • Do not use matches, lighters, or candles until you are certain that there are no gas leaks. • Do not use the telephone. • Do not waste water. • Do not visit the disaster area. This will allow first responders to help those in need. Know that strong aftershocks can happen at any time. Helpful tips and guidance on additional steps you can take after the disaster are contained in the Survival Guide section near the front of your telephone directory. Stay tuned to this station for more information from the California Office of Emergency Services.
Status Message	{Describe incident impacts and critical damage areas.} State and local responders are mobilized; Federal assets have been notified and are awaiting requests for assistance. Continuing assessments of the incident's impacts are underway and updates will follow. Use personal survival kits and put in place your personal emergency plans to sustain yourself, your family and your neighbors.
Shelter Message	If you do not have to leave, stay where you are and remain calm. If you must seek shelter, shelters have been setup at {insert main mega shelter locations}. For more information, listen to radio {enter stations here} for general emergency notifications and updates.

Messages for Phase 2A (Activation – Immediate Response) (I + 12 hours)	
Type	**Text**
Special Message to Emergency Responders	Report to duty if you are able to do so. Use text messaging when possible to communicate with family members, as phone service may be interrupted for extended periods of time.
Pets and Livestock Message	If you have pets, please keep them with you. Do not release your pets or livestock. There is limited or no medical support for pets and livestock at shelters; some vets are on site at the following locations: {Locations of medical sites with veterinary care}.

Messages for Phase 2B (Deployment and Employment) (I + 12-72 hours)	
Type	**Text**
Status Message	{Describe incident impacts and critical locations of damage.} State and local responders are mobilized and federal assets have been notified and are awaiting requests for assistance. Continuing assessments of the situation are underway and updates will follow. Use personal survival kits and continue putting your personal emergency plans in action to sustain yourself, your family and your neighbors.
Operations Message	Emergency service and rescue operations are underway. {Provide contact information and procedures for survivors to obtain emergency assistance, if it is needed.} {Focus on success/human interest stories, but provide realistic and accurate estimates of incident impacts.} Operations to repair local infrastructure, roads, utilities, etc., are also underway. {Indicate that local, state, and federal repair are being mobilized to disaster sites to provide assistance and how resources are being employed. Report success stories and the addition of any new capabilities as they become available. Provide estimates on when services will return.} {Provide details on operations underway to provide for basic life-

Messages for Phase 2B (Deployment and Employment) (I + 12-72 hours)	
Type	**Text**
	sustaining needs (water, food, shelter, energy/power and waste removal).} Programs and plans are in place to assist businesses and homeowners. {Provide information on where property owners can get assistance/support for claims and repair services.} If you would like to volunteer to help, visit the California Volunteers website at *www.californiavolunteers.org* to find agencies that might need volunteers. If you would like to give a monetary donation, please visit the California Volunteers website at *www.californiavolunteers.org* to see a list of organizations accepting monetary donations that are supporting or providing services to those impacted by the disaster. If you would like to donate in-kind donations, please visit the California Volunteers website at *www.californiavolunteers.org* or the California Office of Emergency Services website at *www.caloes.ca.gov*.
Ongoing Operations Messages	{Cover what emergency services and rescue operations are ongoing. Focus on success and human interest stories.} {Cover how response operations are providing life-sustaining supplies and services (water, food, shelter, alternate energy sources and waste removal). Focus on success and human interest stories. Provide information on how outside organizations and people can help.} {Cover how response efforts to repair local infrastructure, roads, utilities, etc., are ongoing. Provide information on plans to restore services and estimates on when basic services will return.} {Provide information on how response organizations are assisting property owners. Report types of assistance and amount of aid available to property owners and businesses from private and government programs.}

Messages for Phase 2B (Deployment and Employment) (I + 12-72 hours)	
Type	**Text**
Message for Volunteers	Do not self-dispatch or travel to the affected area unless you are an affiliated volunteer responding to an assignment from the volunteer organization with which you are affiliated. Please visit the California Volunteers website at *www.californiavolunteers.org* to find volunteer opportunities and a list of organizations accepting monetary donations.

ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 3: ENVIRONMENTAL RESPONSE/HEALTH & SAFETY

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 4: MASS CARE SERVICES

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ANNEX C: OPERATIONS
APPENDIX 5: MASS SEARCH AND RESCUE

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 6A: MEDICAL SURGE

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 6B: PUBLIC HEALTH AND MEDICAL SERVICES – PATIENT MOVEMENT

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 6C: PUBLIC HEALTH AND MEDICAL SERVICES – PUBLIC HEALTH AND ENVIRONMENTAL HEALTH

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 7: INFRASTRUCTURE SYSTEMS

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 8: ON-SCENE SECURITY AND PROTECTION

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 9: FATALITY MANAGEMENT SERVICES

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ANNEX C: CONCEPT OF OPERATIONS
APPENDIX 10: FIREFIGHTING

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ANNEX D: LOGISTICS AND RESOURCES MOVEMENT AND COORDINATION

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ANNEX D: LOGISTICS AND RESOURCES MOVEMENT AND COORDINATION

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ANNEX E: OPERATIONAL COMMUNICATIONS
APPENDIX 1: COMMUNICATIONS CONTACTS

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ANNEX X: EXECUTION CHECKLIST

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ANNEX Y: ACRONYMS

ACI	Advanced Contract Initiative
ACM	Airspace Coordinating Measure
ACO	Airspace Control Order
ACS	Alternative Care Sites
ACS	Auxiliary Communications Service Program (Cal OES)
ADA	Americans with Disabilities Act
AE	Aero-Medical Evacuation
AFB	Air Force Base
AFN	Access and Functional Needs
ALRT	Advanced Logistics Reception Team
ALS	Advanced Life Support
AMC	Air Mobility Command
AMSAT	Radio Amateur Satellite Corporation
ANG	Air National Guard
ANT	Aid to Navigation Team
AOB	Air Operations Branch
AOR	Area of Responsibility
APHIS	Animal and Plant Health Inspection Service
APOD	Airfield Points of Debarkation
APOE	Airfield Points of Embarkation
ARC	American Red Cross
ARES	Amateur Radio Emergency Services
ARF	Action Request Form
ARNG	Army National Guard
ARTCC	Air Route Traffic Control Center
ASMC	US Army Area Support Medical Company
ASPR	Assistant Secretary for Preparedness and Response
AST	Ambulance Strike Team
ATC	Air Traffic Control, Applied Technology Council
ATF	Bureau of Alcohol, Tobacco, Firearms and Explosives
ATLS	Advanced Trauma Life Support
ATV	All-Terrain Vehicle
AVB	Aviation Branch Director
AWAC	Airborne Warning and Control System
AWS	Alert Warning System
BCSHA	Business Consumer Services and Housing Agency (California)

BLM	Bureau of Land Management
BSI	Base Support Installation
C2	Command and Control
C3	Command, Control, and Communications
C4	Command, Control, Coordinate, and Collaborate
CA	California
CAHAN	California Health Alert Network
CALCORD	California On-Scene Emergency Coordination
CalDIT	California Dental Identification Team
Cal/EPA	California Environmental Protection Agency
CAL FIRE	California Department of Forestry and Fire Protection
CAL-MAT	California Medical Assistance Team
Cal OES	California Governor's Office of Emergency Services
Caltrans	California Department of Transportation
CalSTA	California State Transportation Agency
CalWARN	California Water/Wastewater Agency Response Network
CANG	California Air National Guard
CNG	California National Guard
CAP	Civil Air Patrol
CAPSNET	California Public Safety Microwave Network
CARES	California Animal Response Emergency System
CBRNE	Chemical, Biological, Radiological, Nuclear, and Explosive
CCWSD	Crescent City Water Supply District
CDAA	California Disaster Assistance Act
CDC	Centers for Disease Control and Prevention
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
CERFP	CBRNE Enhanced Response Force Packages
CERT	Community Emergency Response Team
CESRS	California Emergency Services Radio System
CFR	Code of Federal Regulations
CG	Coast Guard
CG IMAT	CG Incident Management Assistance Team
CGS	California Geological Survey
CHHS	California Health and Human Services Agency
CHP	California Highway Patrol

CI	Critical Infrastructure
CIKR	Critical Infrastructure/Key Resources
CIR	Critical Information Requirements
CIS	Catastrophic Incident Supplement
CISM	Critical Incident Stress Management
CIWMB	California Integrated Waste Management Board
CLEMARS	California Law Enforcement Mutual Aid Radio System
CLERS	California Law Enforcement Radio System
CLETS	California Law Enforcement Telecommunications System
CMARS	California Multi-Agency Radio System
CMS	Consumable Medical Supplies
CMS	Changeable Message Sign (Caltrans)
CNG	California National Guard
COA	Course of Action
COG	Continuity of Government
COP	common operating picture
CONUS	Continental United States
COOP	Continuity of Operations Plan
COTP	Captain of the Port
CPUC	California Public Utilities Commission
CREW	Cascadia Region Earthquake Workgroup
CST	Civil Support Team
CSTL	Civil Support Task List (CNG)
CSZ	Cascadia Subduction Zone
CUEA	California Utilities Emergency Association
CUPA	Certified Unified Program Agency
CWIN	Critical Infrastructure Warning Information Network
DAE	Disaster Assistance Employee
DC	Distribution Centers
DCDC	Division of Communicable Disease Control (CDPH)
DCE	Defense Coordinating Element
DCM	Disaster Case Management
DCO	Defense Coordinating Officer
DDOC	Deployable Distribution Operations Center
DDWEM	Division of Drinking Water and Environmental Management (CDPH)
DEA	Drug Enforcement Agency
DEC	Disaster Emergency Communications
DEODC	Division of Environmental and Occupational Disease Control (CDPH)

DFA	Direct Federal Assistance
DFC	Disaster Finance Center
DFSC	Disaster Field Supply Center (ARC)
DGS	California Department of General Services
DHCS	California Department of Health Care Services
DHS	Department of Homeland Security
DHV	Disaster Healthcare Volunteer
DLA	Defense Logistics Agency
DMAT	Disaster Medical Assistance Team
DME	Durable Medical Equipment
DMORT	Disaster Mortuary Operations Response Team
DMSU	Disaster Medical Support Unit
DOC	Department Operations Center
DoD	US Department of Defense
DOE	US Department of Energy
DOI	US Department of the Interior
DOJ	US Department of Justice
DOL	US Department of Labor
DOS	US Department of State
DOT	US Department of Transportation
DPMU	Disaster/Deployable Portable Morgue Unit
DPR	California Department of Parks and Recreation
DRC	Disaster Recovery Center
DRF	Disaster Relief Fund
DRG	District Response Team (USCG)
DRT	Disaster Response Team
DSAT	Disaster Survivor Assistance Team
DSCA	Defense Support of Civil Authorities
DSS	Digital Satellite Service
DSW	Disaster Service Worker
DTSC	Department of Toxic Substance Control (California)
DWR	Department of Water Resources
EA	External Affairs
EAS	Emergency Alert System
ECS	Emergency Communication System
EDIS	Emergency Digital Information System
EEI	Essential Elements of Information
EF	Emergency Function

EMAC	Emergency Management Assistance Compact
EMEDS	Air Force Expeditionary Medical System
EMMA	Emergency Management Mutual Aid
EMR	Electronic Medical Records
EMS	Emergency Medical Services/Emergency Management System
EMSA	Emergency Medical Services Authority
EO	Executive Order
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPAP	Emergency Prescription Assistance Program
ERCB	Emergency Risk Communications Branch
ERT	Emergency Response Team
ESA	Emergency Services Act (California)
ESF	Emergency Support Function
EXORD	Executive Order
FAA	Federal Aviation Administration
FAMS	Federal Air Marshals Service
FAST	Functional Assessment Service Team
FBI	Federal Bureau of Investigation
FBM	foot, board measure
FBO	faith-based organization
FCC	Federal Communications Commission
FCC	Federal Coordination Center (NDMS)
FCW	Flood Control Works
FCO	Federal Coordinating Officer
FDA	Food and Drug Administration
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FHWA	Federal Highway Administration
FIREMARS	Fire Mutual Aid Radio System
FLEO	Federal Law Enforcement Officer
FMS	Federal Medical Station
FOUO	for official use only
FPHMO	Federal Public Health Medical Official
FRA	Federal Railroad Administration
FSA	Federal Staging Area
FSRT	Fatality Search and Recovery Team (CNG)

FWBM	Fixed-Wing Base Manager
GETS	Government Emergency Telecommunications Service
GIS	Geographic Information System
GSA	General Services Administration
HAM	amateur radio operator
HAvBED	Hospital Available Beds for Emergencies and Disasters
HAZMAT	hazardous material
HAZUS-MH	Hazards United States-Multi-Hazard
HAZWOPER	Hazardous Waste Operations and Emergency Response
HBMWD	Humboldt Bay Municipal Water District
HBPP	Humboldt Bay Power Plant
HCF	Healthcare Facility
HEAR	Hospital Emergency Administrative Radio System
HF	high frequency
HHS	US Department of Health and Human Services
HIPAA	Health Insurance Portability and Accountability Act
HITRAC	Homeland Infrastructure Threat and Risk Analysis Center
HOH	Hard of Hearing
HQ	headquarters
HRF	Homeland Response Force
HSAS	Homeland Security Advisory System
HSIN	Homeland Security Information Network
HSPD	Homeland Security Presidential Directive
IA	Individual Assistance
IAA	Incident Awareness and Assessment
IAP	Incident Action Plan
IA-TAC	Individual Assistance – Technical Assistance Contracts
IC4U	IC's Command, Control, and Control Unit
iCAV	Integrated Common Analytical Viewer
ICP	Incident Command Post
ICS	Incident Command System
IDIQ	indefinite delivery/indefinite quantity
IMAT	Incident Management Assistance Team
IMSuRT	International Medical Surgical Response Team
IMT	Incident Management Team
IOF	Initial Operating Facility
IRCT	Incident Response Coordination Team
IRCT-A	Incident Response Coordination Team - Advance

ISB	Incident Support Base
ISP	Incident Support Plan
IST	Incident Support Team
IST-A	Incident Support Team - Advance
IT	Information Technology
JEOC	Joint Emergency Operations Center
JFC	Joint Force Commander
JFHQ	Joint Force Headquarters
JFO	Joint Field Office
JIC	Joint Information Center
JLOC	Joint Logistics Operations Center
JLOTS	Joint Logistics Over-the-Shore
JOC	Joint Operations Center
JRSOI	Joint Reception Staging and Onward Integration (CNG)
JTF	Joint Task Force
L&C	Licensing and Certification Program (CDPH)
LAC	local assistance center
LAN	local area network
LEMSA	Local Emergency Medical Services Agencies
LFA	Lead Federal Agency
LHD	local health department
LM	logistics management
LMC	Logistics Management Center
LMD	Logistics Management Directorate
LMR	land/mobile radio
LMRS	Logistics Management and Resource Support
LNO	Liaison Officer
LOS	line of sight
LOTS	Logistics-Over-The-Shore
LRN	Laboratory Response Network
LSCMS	Logistics Supply Chain Management System
M	Magnitude
MA	Mission Assignment
MACS	Multi Agency Coordination System
MAFFS	Modular Airborne Fire Fighting System
MARAD	US Department of Transportation, Maritime Administration
MARS	Military Auxiliary Radio System
ME	Medical Examiner

Medevac	medical evacuation
MEOV	Mobile Emergency Operations Vehicle
MERS	Mobile Emergency Response Support
MFH	Mobile Field Hospital
MHE	Material Handling Equipment
MHCC	Medical and Health Coordination Center
MHOAC	Medical Health Operational Area Coordinator
MHT	Mental Health Team
MHz	Megahertz
MIGU	Mobile Interoperability Gateway Units
MLB	Motorized Lifeboat
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRC	Medical Reserve Corps
MRE	Meal Ready to Eat
MSD	Marine Safety Detachment Unit
MSDS	Material Safety Data Sheets
MSL	mean sea level
MST	Mission Support Team
MTU	Mobile Tower Unit
NARSC	National Animal Rescue and Sheltering Coalition
NCC	National Coordination Center for telecommunications
NCIPP	National Critical Infrastructure Prioritization Program
NCS	National Communications System
NDMN	National Donations Management Network
NDMS	National Disaster Medical System
NDRF	National Disaster Recovery Framework
NDT	National Decontamination Team
NEMIS-IAC	National Emergency Management Information System – Incident Activity Manager
NG	National Guard
NGB	National Guard Bureau
NGO	nongovernmental organization
NGS	National Geospatial Intelligence Agency
NICC	National Infrastructure Coordination Center
NIFC	National Interagency Fire Center
NIMS	National Incident Management System
NIPP	National Infrastructure Protection Plan

NIST	National Incidence Support Team
NLC	National Logistics Coordinator
NLS	National Logistics System
NM	nautical mile
NMCC	National Military Command Center
NOAA	National Oceanic and Atmospheric Administration
NOC	National Operations Center
NoCal	northern California
NPFC	National Pollution Funds Center (USCG)
NPS	US National Park Service
NPSPAC	National Public Safety Planning Advisory Committee
NRCC	National Response Coordination Center
NRCS	National Response Coordination Staff
NRF	National Response Framework
NRT	National Response Team
NSFCC	National Strike Force Coordination Center (USCG)
NSP	National Support Plan
NSS	National Shelter System
NVOAD	National Volunteer Organizations Active in Disaster
NVRT	National Veterinary Response Team
NWR	NOAA Weather Radio-All Hazard
NWS	National Weather Service
OA	Operational Area
OASIS	Operational Area Satellite Information System
OCIO	Office of the Chief Information Officer
OCIO-PSCD	Office of the Chief Information Officer – Public Safety Communications Div
OCONUS	outside the continental United States
OEHHA	Office of Environmental Health Hazard Assessment (California)
OFA	other federal agencies
OMB	Office of Management and Budget
OPA	Oil Pollution Act (USCG)
OPLAN	Operations Plan
OSC	Operations Systems Centers
OSHA	Occupational Safety and Health Administration
OSHPD	Office of Statewide Health Planning and Development
PA	public assistance
PAGER	Prompt Assessment of Global Earthquakes for Response

PAO	Public Assistance Officer
PDA	Preliminary Damage Assessment
PG&E	Pacific Gas & Electric Company
PIAT	Public Information Assist Team (USCG)
PICU	Pediatric Intensive Care Unit
PIO	Public Information Officer
PMR	Patient Movement Request
PNP	private nonprofit
POC	point of contact
POD	Point of Distribution
POL	Petroleum, Oil, and Lubricants
POTUS	President of the United States
PPD	Presidential Policy Directive
PPE	Personal Protective Equipment
PRT	Planning and Response Team
PSA	public service announcement
PSA	Protective Security Advisor (DHS)
PSAP	Public Safety Answering Point
PSMA	Pre-Scripted Mission Assignment
RA	Regional Administrator
RACES	Radio Amateur Civil Emergency Services
RCB	Resource and Capability Branch
RCTWG	Redwood Coast Tsunami Work Group
RDIS	Regional Disability Integration Specialist
RDMHC	Regional Disaster Medical Health Coordinator
RDMHS	Regional Disaster Medical Health Specialist
RDF	Rapid Deployment Force
REC	Regional Emergency Coordinator (HHS)
REOC	Regional Emergency Operations Center
RERT	Radiological Emergency Response Team
RFA	Request for Assistance
RFI	Request for Information
RHB	Radiological Health Branch (CDPH)
RIMS	Response Information Management System
RISC	Regional Interagency Steering Committee
RIST	Response Incident Support Team
RICT	Response Incident Coordination Team
RORO	roll-on/roll-off

ROWPU	Reverse Osmosis Water Purification Unit
RRCC	Regional Response Coordination Center
RRCS	Regional Response Coordination Staff
RRF	Regional Response Force
RRT	Regional Response Team
RSC	Response Support Camps
RSF	Recovery Support Function
RSOI	Reception, Staging, Onward Movement, and Integration
RSP	Regional Support Plan
RSS	Resource Support Section
RST	Regional Support Team
SA	staging area
SAG	Strategic National Stockpile Assistance Group
SAMHSA	Substance Abuse and Mental Health Services Administration
SAP	Structural Assessment Program
SAP	Safety Assessment Program
SAR	Search and Rescue
SCADA	Supervisory Control and Data Acquisition
SCO	State Coordinating Officer
SEMS	Standardized Emergency Management System
SHARES	Shared Resources High Frequency Radio Program
SITREP	Situation Report
SME	subject matter expert
SMN	Special Medical Needs
SNF	Skilled Nursing Facilities
SNS	Strategic National Stockpile
SOC	State Operations Center
SOP	Standard Operating Procedures
STA	Search and Rescue Station
STATCOM	State Communications System
SWAT	Special Weapons and Tactics
TDRS	Temporary Disposal and Reduction Site
TDSRS	Temporary Debris Storage and Reduction Site
TF	task force
TMC	Transportation Management Center
TSA	Transportation Safety Administration
TSP	Telecommunications Service Priority
TSU	Transportation Services Unit

TTY	text telephone
USC	United States Code
UAC	Unified Area Command
UASI	Urban Area Security Initiative
UCG	Unified Coordination Group
UHF	ultra-high frequency
UOC	Utilities Operations Center
US&R	Urban Search and Rescue
USACE	United States Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USGS	United States Geological Survey
USMS	United States Marshals Service
USNG	United States National Grid
USNORTHCOM	United States Northern Command
VA	US Department of Veterans Affairs
VAL	Voluntary Agency Liaison
VEST	Volunteer Emergency Support Team
VFR	Visual Flight Rules
VHF	very high frequency
VIP	very important person
VMAT	Veterinary Medical Assistance Team
VOAD	Voluntary Organizations Active in Disaster
VoIP	Voice over Internet Protocol
VOLAG	Volunteer Agencies
VSAT	very small aperture terminal
VTC	video teleconference
WAN	wide area network
WPS	Wireless Priority Service

ANNEX Z: DISTRIBUTION

Z.1 Overview

The distribution authorities for this product are the California Governor's Office of Emergency Services (Cal OES) Director and the FEMA Region IX Regional Administrator (or designees). To request copies of this plan or for questions regarding the use and sharing of this plan, you may contact the FEMA Region IX Response Division Director.

Only share this OPLAN (whether electronic or hard copy) with individuals identified as those with a "need to know" and ensure protection of material throughout the process.

Do not post this Operations Plan (OPLAN) on unsecure web sites, open common drives, SharePoint sites, or unsecured discs.

Information within the OPLAN is not automatically exempt from disclosure under the provisions of the Freedom of Information Act (FOIA). Requests must be reviewed on a case-by-case basis.

Z.2 Handling Instructions

Information contained in this plan is "For Official Use Only" (FOUO). Distribution of this document is limited and not releasable to the general public or to any public website (public availability to be determined under 5 United States Code §552). Although this is an interagency plan, dissemination of this plan outside the distribution channels outlined here must be approved by FEMA Region IX.

Distribution of this plan will include:

- FEMA Region IX
- FEMA Region X
- FEMA Headquarters
- CSZ OPLAN Senior Leadership Steering Committee members
- California Governor's Office of Emergency Services
- Federal Emergency Support Function (ESF) Region IX Agency coordinators
- Appropriate nongovernmental organizations/agencies

Z.3 Disposal

Upon any update to the OPLAN, holders of assigned copies will receive revised materials but must destroy existing, obsolete sections or versions.

OPLANs designated for disposal must be shredded or burned.

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