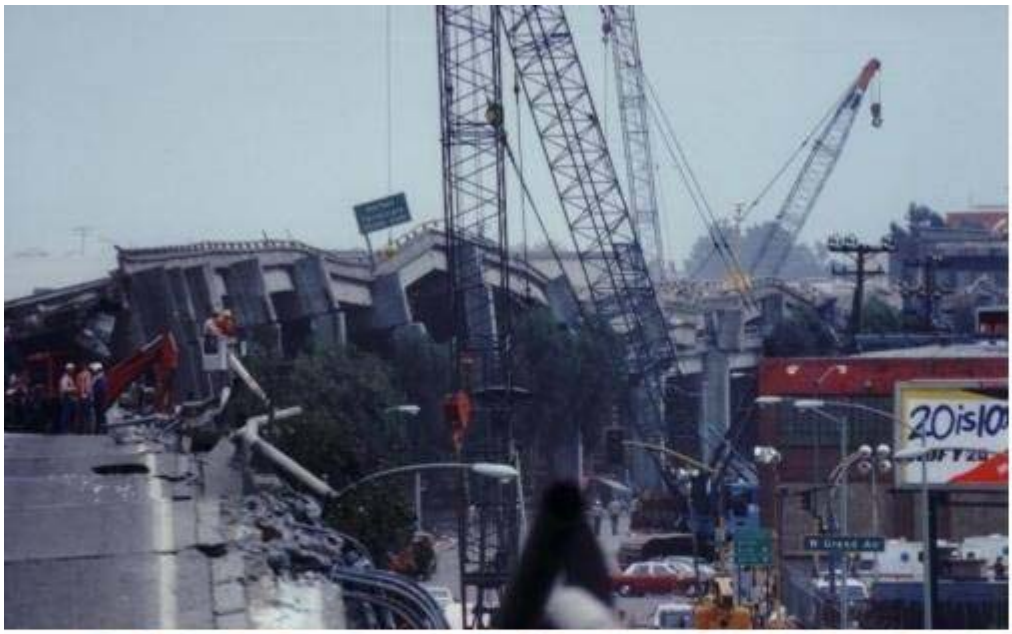

CONTRA COSTA OPERATIONAL AREA

EARTHQUAKE

CONCEPT OF OPERATIONS PLAN

February 2010

Contra Costa Operational Area

Earthquake Concept of Operations Plan

INTERIM PLAN

February 2010

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2/26/10	OES and URS Corporation	Incorporate workshop comments

Forward

The vulnerability of the San Francisco Bay Area to earthquakes is well known. According to the 2008 *Uniform California Earthquake Rupture Forecast*,[1] the probability of a magnitude (**M**) ≥6.7 earthquake in the Bay Area within the next 30 years is 63 percent. An earthquake of this magnitude will result in widespread and catastrophic damage.

The most recent large earthquake on the Hayward fault was in 1868, 140 years ago. Because the past five large earthquakes on the Hayward fault have occurred with a mean frequency of 140 years, the Hayward fault and its extension to the north, the Rodgers Creek fault, are the most likely faults to produce a large earthquake in the Bay Area.

Although a catastrophic earthquake on the Hayward fault would have a greater impact on Contra Costa County than an earthquake on another fault in the Bay Area, a major earthquake on any of the Bay Area faults will immediately overwhelm local, regional, and State emergency response capabilities. Local governments will need massive, rapid support from the other local governments in California, the State, the Federal government, other states, and nonprofit and private-sector organizations. The effectiveness of the region's response will affect the long-term recovery of the region's communities and economy. An effective response will be possible only if comprehensive planning has taken place.

The **Contra Costa Operational Area Earthquake Concept of Operations Plan** (Plan) is a scenario-specific application of the Contra Costa Operational Area Emergency Operations Plan (EOP). The Plan provides:

- An outline of the Operational Area's response operations
- Tools for initial decision-making that will support the Operational Area's efforts to address the priorities created by the earthquake
- An incident-specific application of procedures for requesting and implementing resources from outside the jurisdiction

The Plan was prepared by the Sheriff's Office of Emergency Services (OES), and is intended for use by:

- Elected officials responsible for making decisions regarding the Operational Area's response
- Personnel responsible for implementing the Operational Area EOP, including emergency managers and Emergency Operations Center (EOC) personnel
- Departments and organizations responsible for implementing response operations in the Operational Area

[1] Edward H. Field et al., The Uniform California Earthquake Rupture Forecast, Version 2.0 (UCERF 2), (USGS Open File Report 2007-1437, 2008). Available at http://pubs.usgs.gov/ of/2007/1437/.

- Incorporated cities/towns and special districts, which can use the Plan to develop their own earthquake response plans. OES has prepared a template for this purpose.

The Plan consists of a base plan and three annexes.

- The **base plan** includes a description of the scenario earthquake, general and county-specific assumptions about the scenario earthquake, a concept of operations, and a list of priorities and time-based objectives for the response to the scenario earthquake.
- **Annex A** includes descriptions of 15 Emergency Support Functions (ESFs) and the concept of operations for each of these functional areas in the response to the scenario earthquake. Annex A is intended for use by the EOC elements and County departments with responsibility for implementing each ESF.
- **Annex B** includes the Operational Area EOC Information Collection Plan for the response to a catastrophic earthquake. It describes the types of information necessary for senior leaders, emergency managers, EOC staff, and Incident Commanders to understand the situation and make decisions regarding response priorities and resource allocations.
- **Annex C** contains maps that support the Plan.

The comprehensive effort to develop this Plan was led by OES, The following organizations participated in the Steering Committee for Plan development:

- American Red Cross
- California Emergency Management Agency, Coastal Region
- City of Danville
- Contra Costa County Fire Protection District
- Contra Costa County Department of Conservation and Development
- Contra Costa County Employment and Human Services Department
- Contra Costa County General Services Department
- Contra Costa County Health Services Department
  - Environmental Health Division
  - Emergency Medical Services Division
  - Hazardous Materials Division
- Contra Costa County Office of the Sheriff
- Contra Costa County Public Works Department
- Contra Costa Water District
- Regional Center of the East Bay

Additional County departments and other organizations participated in discussions regarding the Plan and provided comments. The Plan was prepared with the assistance of URS Corporation.

Table of Contents

List of Tables (Base Plan)

List of Maps (Base Plan and Annex A)

Acronyms and Abbreviations

This list includes acronyms for the base plan, the tabs included in Annex A, and Annex B.

AC Transit	Alameda-Contra Costa Transit
AMR	American Medical Response
APHIS	Animal and Plant Health Inspection Service
ARC	American Red Cross
BART	Bay Area Rapid Transit
BATFE	Bureau of Alcohol, Tobacco, Firearms and Explosives
Cal EMA	California Emergency Management Agency
CAL FIRE	California Department of Forestry and Fire Protection
Cal-MAT	California Medical Assistance Team
CALSTAR	California Shock Trauma Air Rescue
Caltrans	California Department of Transportation
CAO	County Administrative Officer
CARES	California Animal Response Emergency System
CBP	U.S. Customs and Border Protection
CCCFPD	Contra Costa County Fire Protection District
CCHS	Contra Costa Health Services
CCPIN	Contra Costa Public Information Network
CCTA	Contra Costa Transportation Authority
CDC	Centers for Disease Control and Prevention
CDFA	California Department of Food and Agriculture
CDPH	California Department of Public Health
CDSS	California Department of Social Services
CEC	California Energy Commission
CERT	Community Emergency Response Team
CESRS	California Emergency Services Radio System
CHP	California Highway Patrol
CIAB	Cell in a Box
CLERS	California Law Enforcement Radio System
COLT	Cell on Light Trailer
CONPLAN	San Francisco Bay Area Earthquake Readiness Response Concept of Operations Plan
COW	Cell on Wheels

CUEA	California Utilities Emergency Association
CWS	Community Warning System
DEA	U.S. Drug Enforcement Agency
DGS	California Department of General Services
DHS	U.S. Department of Homeland Security
DMAT	Disaster Medical Assistance Team
DMORT	Disaster Mortuary Operational Response Team
DMS	Disaster Medical System (California)
DOC	Department Operations Center
DoD	U.S. Department of Defense
DOE	U.S. Department of Energy
DoIT	Department of Information Technology
DSW	Disaster Service Worker
DWR	California Department of Water Resources
E	earthquake
EDIS	Emergency Digital Information System
EMS	Emergency Medical Services
EMSA	Emergency Medical Services Authority
EOC	Emergency Operations Center
EOP	Emergency Operations Plan
EPIO	Emergency Public Information Officer
ESF	Emergency Support Function
FAST	Functional Assessment Service Team
FBI	Federal Bureau of Investigation
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FOSC	Federal On-Scene Coordinator
FPS	Federal Protective Service
GSA	U.S. General Services Administration
HAZMAT	hazardous materials
HAZMAT IR	Hazardous Materials Incident Response (Contra Costa County)
HAZUS-MH	Hazards U.S. – Multi-Hazard
HICS	Hospital Incident Command System
HUD	U.S. Department of Housing and Urban Development
I	Interstate
ICE	U.S. Immigration and Customs Enforcement

ICP	Incident Command Post
ICS	Incident Command System
JEOC	Joint Emergency Operations Center
JFO	Joint Field Office
JIC	Joint Information Center
L&C	Licensing and Certification Program (California Department of Public Health)
LAC	Local Assistance Center
LMR	Land Mobile Radio
M	moment magnitude
MAC	Multi-Agency Coordination
MAMFF	Mutual Aid Mobile Field Force
MERS	Mobile Emergency Response Support
MHOAC	Medical Health Operational Area Coordinator
MOTCO	Military Ocean Terminal Concord
MRC	Medical Reserve Corps
MRE	Meal-Ready-To-Eat
MTC	Metropolitan Transportation Commission
NDMS	National Disaster Medical System
NGO	non-governmental organization
NIMS	National Incident Management System
OASIS	Operational Area Satellite Information System
OES	Sheriff's Office of Emergency Services
OSHPD	California Office of Statewide Health Planning and Development
OSPR	Office of Spill Prevention and Response (California Department of Fish and Game)
PG&E	Pacific Gas & Electric
PHS	U.S. Public Health Service
PIC	Public Information Center
PIO	Public Information Officer
POD	Point of Distribution
PSAP	Public Safety Answering Point
RACES	Radio Amateur Civil Emergency Service
RDMHC	Regional Disaster Medical Health Coordinator
REACH	Redwood Empire Air Care Helicopter
RECP	Regional Emergency Coordination Plan

REOC	Regional Emergency Operations Center
RIMS	Response Information Management System
RTEMP	Regional Transportation Emergency Management Plan
SAP	Safety Assessment Program
SBA	U.S. Small Business Administration
SEMS	Standardized Emergency Management System
SNS	Strategic National Stockpile
SOC	State Operations Center
SRA	State Responsibility Area
TENS	Telephone Emergency Notification System
TRANSCOM	U.S. Transportation Command
TSA	U.S. Transportation Security Administration
US EPA	U.S. Environmental Protection Agency
UASI	Urban Area Security Initiative
UHF	ultra high frequency
US&R	Urban Search and Rescue
USACE	U.S. Army Corps Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey
USMS	U.S. Marshals Service
VHF	very high frequency
WARN	Water/Wastewater Agency Response Network
WestCAT	Western Contra Costa Transit Authority
WETA	Water Emergency Transportation Authority

Section One: Introduction

An earthquake-specific plan includes the standard elements of a typical Emergency Operations Plan (EOP) but focuses on addressing the impacts of and challenges associated with the earthquake.

The Contra Costa Operational Area Earthquake Concept of Operations Plan (Plan) is a scenario-driven, function-specific application of the Contra Costa Operational Area EOP. It describes the Operational Area response to a catastrophic earthquake in the Bay Area.

1.1 Purpose

The Plan provides an outline of the response operations in the Contra Costa County Operational Area and provides tools for initial decision-making that will support the Operational Area's efforts to address the needs created by the earthquake. The severity of the earthquake's impacts may overwhelm the Operational Area's capabilities for response. Therefore, the Plan describes incident-specific application of procedures for requesting and implementing resources from outside the jurisdiction.

The Plan has been prepared by the Sheriff's Office of Emergency Services (OES). The Plan is intended for use by:

- Elected officials responsible for making decisions regarding the Operational Area response
- Personnel responsible for implementing the Operational Area EOP, including emergency managers and Emergency Operations Center (EOC) personnel
- Departments and organizations responsible for implementing response operations in the Operational Area
- Incorporated cities/towns and special districts, which can use the Plan to develop their own earthquake response plans. OES has prepared a template for this purpose

1.2 Plan Objectives

The Plan:

- Serves as a planning and guidance document to support further development of catastrophic incident plans by Contra Costa County departments and agencies
- Provides an overview of the threat that earthquakes pose to Contra Costa County in general and define the likely specific impacts of a moment magnitude (**M**) 7.1 Hayward fault earthquake or an **M** 6.9 Calaveras fault earthquake

- Provides the Operational Area EOC with contextual information to guide initial response activities including:
  - Assumptions
  - Estimated impacts from a **M** 7.1 Hayward fault and a **M** 6.9 Calaveras fault earthquake event
  - Time-phased objectives for the response
  - Operations in 15 Emergency Support Functions (ESFs) composed of County departments and agencies
  - A response timeline for each ESF defining tasks to be completed, events that affect county operations, and decision points

1.3 Plan Organization

The Plan includes the following components.

- **Introduction** provides an overview of the Plan's purpose, objectives, organization, scope and applicability, and the authorities and regulations that govern the response to the scenario.
- **Situation** contains information regarding the earthquake scenario and its impact on the Contra Costa Operational Area.
- **Concept of Operations** describes the emergency management strategy for the Operational Area in response to a catastrophic earthquake. It identifies coordination structures, methods, and other special considerations for responding to the event.
- **Operational Phased Objectives** provides overall priorities and time-phased objectives for use in response to the earthquake impacts affecting Contra Costa County.
- **Plan Maintenance** provides a brief overview of maintenance and improvement activities.
- **Annex A: Emergency Support Function Operations** provides the concept of operations for the Operational Area's response consistent with each ESF. The ESFs are consistent with the ESFs at the Federal level, which are defined in the National Response Framework. The organization of functions in this manner will assist the Operational Area EOC with coordinating the integration of outside resources. The annex contains roles and responsibilities, assumptions, constraints, concept of operations, and a response timeline for each of the following 15 functional areas:
  - ESF #1: Transportation
  - ESF #2: Communications
  - ESF #3: Public Works and Engineering
  - ESF #4: Firefighting
  - ESF #5: Emergency Management
  - ESF #6: Mass Care, Emergency Assistance, Housing, and Human Services

  - ESF #7: Logistics Management and Resource Support
  - ESF #8: Public Health and Medical Services
  - ESF #9: Urban Search and Rescue
  - ESF #10: Oil and Hazardous Materials Response
  - ESF #11: Agriculture and Natural Resources
  - ESF #12: Energy
  - ESF #13: Public Safety and Security
  - ESF #14: Long-Term Community Recovery
  - ESF #15: External Affairs
- **Annex B: Information Collection Plan** describes the Operational Area EOC Information Collection Plan for the response to a catastrophic earthquake. The plan describes the types of information necessary for senior leaders, emergency managers, EOC staff, and Incident Commanders to understand the situation and make decisions regarding response priorities and resource allocations. The annex includes a table that provides a list of critical information, organized by functional area, which must be collected to support the response.
- **Annex C: Maps** includes maps referenced in the base plan and the tabs to Annex A.

1.4 Scope of Operations

The Plan describes the processes and procedures for emergency response operations after a catastrophic earthquake for agencies and jurisdictions within the Contra Costa Operational Area, including the County government, city and town governments, tribal governments, special districts, non-governmental organizations (NGOs), and the private sector. The Plan defines the roles and responsibilities of these organizations, but does not describe their specific response efforts. The Plan does not address tactics.

The time frame for the Plan begins with the occurrence of the earthquake and ends 30 days after the earthquake. The planning periods (phases) are given in hours and days after the earthquake (E). The Plan does not address preparedness activities that may occur before the earthquake or the longer-term activities that will occur after 30 days.

1.5 Applicability

The Plan supplements the Operational Area EOP by providing considerations for a response to a major earthquake in the Bay Area that has a significant effect on the Contra Costa Operational Area. This Plan does not change policies or directions provided in the EOP, such as policies for activating and managing the EOC. Rather, it provides additional guidance that may be used to complement the EOP.

Many factors affect the impacts of an earthquake , including the amount of energy released, which is based on the length of the rupture; the location and depth of the epicenter; the geologic

conditions near buildings and infrastructure, and the design and condition of buildings and infrastructure. Time of the day the earthquake occurs also affects the impact.

To prepare the plan, OES evaluated the impacts of both the **M** 7.1 Hayward fault and **M** 6.9 Calaveras fault earthquakes. The impact of the Hayward fault earthquake is more severe; therefore, assumptions associated with that earthquake are used predominantly in the plan. However, the assumptions, general resource requirements, objectives, and strategies apply to other potential earthquakes in the Bay Area, such as a major earthquake on the San Andreas fault. The Plan can be used for other earthquakes as well as the Hayward fault earthquake.

The Plan is intended for use by the Operational Area EOC and County Department Operations Centers (DOCs). Incorporated cities/towns and special districts in the Operational Area will receive a copy of the Plan and a template that can be used to facilitate the development of their own earthquake response plans.

1.6 Authorities, Requirements, and Guidance

This section describes laws and regulations that provide emergency authority and govern emergency response operations at the local, State, and Federal levels. Applicable plans and guidance documents are also identified. Plans that pertain to specific functional areas are described in the tabs to **Annex A**.

1.6.1 Local

The Plan is an incident-specific application of the Operational Area EOP. As described in that document, the following authorities and requirements apply:

- Contra Costa County Ordinance 97-41, Operational Area Disaster Council, as amended
- Contra Costa County Resolution 95/309, Establishment of Contra Costa County Operational Area
- Community Incident Reporting Policy, November 1996
- Contra Costa County Code, Title 4 Health and Safety, Chapter 42-2 Disaster Council and Emergency Services

1.6.2 State

State authorities and requirements and State response operations are described in the State of California Emergency Plan and include the following:

- California Emergency Services Act, G.C. §§ 8550–8660
- Standardized Emergency Management System (SEMS), 19 CCR §§ 2400-2450
- California Disaster and Civil Defense Master Mutual Aid Agreement
- Orders and regulations that may be selectively promulgated by the Governor during a State of Emergency

1.6.3 Federal

Federal authorities and requirements and Federal response operations are described in the National Response Framework and the National Incident Management System (NIMS). Federal assistance to State and local governments during and following major disasters is authorized under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S.C. §§ 5121-5206). The response activities of individual Federal agencies and departments may be authorized under separate statutes.

1.6.4 Other Plans

The Plan is consistent with the following:

- Regional Emergency Coordination Plan, prepared by the California Emergency Management Agency (Cal EMA) and the Bay Area Urban Area Security Initiative Program
- San Francisco Bay Area Earthquake Readiness Response, Concept of Operations Plan (CONPLAN), prepared by the Federal Emergency Management Agency (FEMA)

Section Two: Situation

2.1 Scenario

The Plan reflects the impact of an **M** 7.1 earthquake on the Hayward fault, with consideration for incident-specific impacts of an **M** 6.9 earthquake on the Calaveras fault. See **Maps 1** and **2** for approximate fault locations. OES developed the scenario impacts using FEMA's loss estimation system, Hazards U.S. – Multi-Hazard (HAZUS-MH).

Although it is unlikely that the two earthquakes would occur simultaneously, for purposes of this Plan, the impacts from both earthquakes were analyzed and the greater impact of the two was used to develop the impact assumptions. The references to "the earthquake" throughout the document refer to the **M** 7.1 Hayward fault earthquake, but when the **M** 6.9 Calaveras fault earthquake significantly affects a response activity in the Operational Area, that earthquake is identified.

2.2 Geographic Scope

The Plan focuses on Contra Costa County. **Map 1** shows Contra Costa County, its incorporated cities and towns, and the geographic regions within the County (West, East, Central, South). Alameda, Marin, Napa, San Francisco, Santa Clara, San Mateo, Solano, and Sonoma counties will also bear significant, direct impacts from the earthquake or from regional disruption of critical infrastructure systems and short- and long-term impacts to the economy.

Adjacent counties such as Sacramento, San Joaquin, Stanislaus, and Yolo may be affected immediately by evacuations and other response actions. An earthquake of this magnitude will also have significant economic impact in the rest of California and the nation.

2.3 General Characteristics and Impacts

The Hayward fault earthquake has the following characteristics:

- The earthquake occurs at 2:00 pm Pacific Standard Time.
- The epicenter of the earthquake is in San Pablo Bay. See **Map 2** for the location of the epicenter and the peak ground acceleration associated with the earthquake.[2]
- The estimated magnitude is **M** 7.1 with a Modified Mercalli intensity of VIII (severe shaking/moderate to heavy damage) to IX (violent shaking/heavy damage) in widespread areas of the most severely affected parts of the Bay Area, including West County. **Map 2** shows peak ground acceleration for the earthquake. **Map 3** shows areas of potential liquefaction, which may exacerbate the effects of the earthquake.

[2] The epicenter of the **M** 6.9 Calaveras earthquake used for this analysis is located just south of Calaveras Reservoir in Santa Clara County.

- Threats and hazards resulting from shaking, surface fault rupture, and liquefaction throughout the Bay Area include:
  - Structural and nonstructural damage to buildings and infrastructure, including widespread collapse of buildings
  - Widespread fires
  - Subsidence and loss of soil-bearing capacity, particularly in areas of liquefaction
  - Displacement along the fault
  - Widespread landslides
  - Hazardous materials (HAZMAT) spills and incidents
  - Dam/levee failure resulting in flooding
  - Criminal activity

2.4 Assumptions

The following assumptions are generally applicable to Contra Costa County for the earthquake scenarios described in **Section 2.1**.

1. The earthquake will exceed the emergency response capabilities of the Contra Costa Operational Area, other public and private-sector entities in the Bay Area region, and the State. Additional resources from other states and/or the Federal government will be required to achieve an effective response.
2. Because of extensive damage to buildings and transportation infrastructure in Oakland, Cal EMA's Regional Emergency Operations Center (REOC) in Oakland initially will not be functional.
3. Within 24 hours, government officials and agencies will respond as follows:
   - The County Chief Administrative Officer (CAO) proclaims a Local Emergency.
   - The Governor proclaims a State of Emergency and requests that the President declare a Major Disaster.
   - The President declares a Major Disaster, making Federal assistance available under the Stafford Act.
   - U.S. Department of Homeland Security and FEMA immediately begin mobilizing Federal resources. Federal resources will be deployed to Federal staging areas in anticipation of State requests for assistance. It may take longer than 24 hours for Federal resources to arrive, depending on their point of origin.
4. The Operational Area EOC will experience some damage but be partly operational. All other County, city/town, and special district government functions in the Operational Area will be severely compromised or focused entirely on the response to the earthquake.

5. The impact from the earthquake will be so catastrophic that the Operational Area EOC initially will be overwhelmed and unable to manage the Operational Area response effectively.

6. **Table 2-1** shows the approximate number of casualties that are expected in Contra Costa County for the two earthquakes at daytime and nighttime hours. See **Annex A, Tabs 8** and **9**, for additional details.

Table 2-1. Injury and Fatality Estimates in Contra Costa County, by Scenario

Scenario	Injuries, Treat and Release	Serious Injuries, Hospital	Requires Rescue	Immediate Deaths
Hayward **M** 7.1 (2 am)	3,520	900	80	150
Hayward **M** 7.1 (2 pm)	4,660	1,600	230	420
Calaveras **M** 6.9 (2 am)	2,280	140	0	10
Calaveras **M** 6.9 (2 pm)	3,320	460	40	60

Source: URS HAZUS analysis (2009)

7. Because of Contra Costa County's topography and damage to infrastructure, entire communities or regions within the County may be isolated from normal population support systems. See **Map 4** for a general depiction of potentially isolated areas.

8. First responders, providers of recovery services, and other critical response personnel will be personally affected by the earthquake and may be unable to report to their posts for days because of damaged transportation infrastructure. Nearly 20 percent of County employees reside outside Contra Costa County in areas that require crossing a bridge; the earthquake will affect the ability of these employees to either reach their posts or remain on duty, given potential impacts to their homes and families.

9. Massive assistance in the form of convergent volunteers, equipment, materials, and money will flow into the Operational Area, providing urgently needed resources but creating coordination and logistical support challenges. See **Annex A, Tabs 1** and **7**.

2.5 Operational Area Capabilities and Expected Needs

A qualitative description of the Operational Area's capabilities and expected needs is provided in **Table 2-2** below, organized by function. As described in **Annex A**, the Operational Area will request assistance through Cal EMA for State and Federal assistance to meet these needs.

Table 2-2. Operational Area Capabilities and Expected Needs

Emergency Support Function	Capabilities	Expected Needs
ESF 1 – Transportation	County vehicle fleet, including contracted buses Transit agency buses and paratransit vehicles Fuel supply at Martinez	Debris clearance from priority routes Repairs to highways/bridges Regional transportation and evacuation Buses, other transit equipment, operators, and fuel Planning, resources, and financial assistance for temporary transportation services for the general population
ESF 2 – Communications	County radio systems State-managed satellite and radio communications systems	Radio caches Deployable gateways and repeaters Mobile satellite systems Assessment and repair teams Fuel for generators at communications towers/sites
ESF 3 – Public Works and Engineering	Public Works Department construction capabilities County airports City/County building inspectors Water/wastewater repair capabilities Generators at water/wastewater plants	Debris clearance, removal, reduction/recycling, and operations management Support for demolition of damaged structures Shoring and temporary repairs Emergency potable water distribution plan Repair crews for water/wastewater systems Testing and laboratory support for drinking water Repair parts and chemicals for water treatment Safety inspectors Damage assessment teams Levee repair/floodfighting on damaged Delta islands Financial assistance for repair/replacement of buildings/infrastructure
ESF 4 – Firefighting	10 fire departments/districts 60+ fire stations 1 State fire station 4 refinery fire departments	Firefighting teams and equipment Specialized equipment for water pumping Logistical support for fire and rescue teams Security Temporary facilities for damaged fire stations

Table 2-2. Operational Area Capabilities and Expected Needs

Emergency Support Function	Capabilities	Expected Needs
ESF 5 – Emergency Management	Operational Area EOP Operational Area EOC and County DOCs City/town and special district EOCs	Agency representatives/liaisons at Operational Area EOC Enhanced coordination with Cal EMA and State, Federal agencies Additional facilities for EOC operations Qualified emergency management personnel or Incident Management Teams
ESF 6 – Mass Care, Emergency Assistance, Housing, and Human Services	162 shelters with evacuation capacity of 25,000+ and sheltering capacity of 13,000+ Numerous NGOs providing services to communities and individuals with access/functional needs County animal shelter	Additional shelters – 40,000+ will require shelter and numerous shelters will be damaged Transportation of displaced individuals to shelters out of the County Supplies to set up and operate shelters Shelter security Assessment of individuals with access/functional needs Medical care and public health monitoring at shelters Mass feeding capabilities Animal care resources, including shelter supplies, food, medical supplies, veterinary services, tracking/reunification, transportation capabilities, and rescue capabilities
ESF 7 – Logistics Management and Resource Support	City/town, county, and special district facilities and sites Emergency procurement capabilities	Commodities necessary to support population, including food, water, medical supplies, and sanitary supplies Transportation of commodities Resources to establish and operate receiving, staging, and distribution sites, including labor, materials handling equipment, and security resources Facilities and commodities to support response operations, including establishment and operation of base camps and other sites

Table 2-2. Operational Area Capabilities and Expected Needs

Emergency Support Function	Capabilities	Expected Needs
ESF 8 – Public Health and Medical Services	10 hospitals Numerous clinics and other healthcare facilities 350+ private sector ambulances	Care for 6,000+ who require medical treatment, including 1,600+ requiring hospitalization Support for mass fatality operations to care for 400+ deceased California Disaster Medical System resources, including Ambulance Strike Teams, California Medical Assistance Teams, Mobile Field Hospitals, and volunteers Coordination of patient evacuation State and Federal transport resources Alternate Care Site equipment and supplies Pharmaceutical caches Federal Disaster Medical Assistance Teams Federal Disaster Mortuary Operational Response Teams Federal public health, sanitary, and mental health resources Disease monitoring Support for food safety inspections Safety and functionality assessments of healthcare facilities
ESF 9 – Urban Search and Rescue	Fire department search and rescue capabilities	4,000+ buildings completely damaged; 200+ people in collapsed buildings At least two Urban Search and Rescue task forces Logistical support to sustain task force operations
ESF 10 – Oil and Hazardous Materials Response	Richmond, San Ramon Valley HAZMAT teams Oil refinery HAZMAT teams Contra Costa Health Services HAZMAT Response team	State and Federal On-Scene Coordinators Technical support for sampling, testing, identification, analysis Response teams and clean-up contractors Additional personnel to secure site perimeters Transportation and logistical support for response teams

Table 2-2. Operational Area Capabilities and Expected Needs

Emergency Support Function	Capabilities	Expected Needs
ESF 11 – Agriculture and Natural Resources	NGOs supporting livestock operators	Opening of transportation routes Deliveries of feed Generators and fuel to restore power to livestock operations Veterinary services and medical supplies Support for euthanasia and disposal operations
ESF 12 – Energy	Pacific Gas & Electric operation of power, and gas distribution systems 4 oil refineries and numerous storage facilities County fuel supply facility Generators at hospitals, water treatment plants, communications sites (48-72 hour fuel supply)	Liquid fuel, including transportation, storage, and distribution Power assessments, generators, and fuel Logistical support for repair crews, including transportation, security, and lodging/base camps
ESF 13 – Public Safety and Security	20+ county, city, and special district law enforcement departments with 2,000+ sworn personnel 60+ law enforcement facilities	Additional personnel for public safety, perimeter security, site/facility security, escorts Security, rescue missions, inmate transportation related to damaged detention centers Logistical support for law enforcement personnel, including lodging, transportation, fuel, maintenance, and support for communications Temporary facilities required due to damage to police stations and other law enforcement facilities
ESF 14 – Long-Term Community Recovery	Significant private sector and NGO presence	Financial assistance through State and Federal recovery programs State coordination of recovery programs Regulatory relief State and regional coordination for planning

Table 2-2. Operational Area Capabilities and Expected Needs

Emergency Support Function	Capabilities	Expected Needs
ESF 15 – External Affairs	Emergency Public Information Planning Team County, city, and special district public information officers	Coordination of State/Federal public information Public information professionals to staff critical public information venues Resources to communicate with access/functional needs individuals

Cal EMA = California Emergency Management Agency
DOC = Department Operations Center
EOC = Emergency Operations Center
EOP = Emergency Operations Plan
ESF = Emergency Support Function
HAZMAT = hazardous materials
NGO = non-governmental organization

Section Three: Concept of Operations

The Operational Area EOC will coordinate support for life-saving and life-sustaining operations immediately following the earthquake, efforts to alleviate the consequences of the incident, and efforts to encourage the recovery of the community and the economy. This section provides an overview of these operations. Refer to **Annex A** for the concept of operations in each functional area.

3.1 Incident Management Structure

The Incident Command System (ICS) will be used for all incidents in the Contra Costa Operational Area. The impacts of the earthquake will cause numerous incidents within the County, requiring the establishment of multiple Incident Command Posts (ICPs). Each Incident Commander will take the following actions:

- Establish the ICP
- Evaluate the scene/incident
- Determine the ICS organizational elements required
- Request additional resources necessary to mitigate the incident
- Assign responsibilities within the ICS organizational structure
- Develop the Incident Action Plan, incorporating incident objectives and strategies

Because multiple incidents will occur simultaneously, it is important for the Incident Commander to communicate with the appropriate jurisdictional EOC to ensure needed resource requests are properly prioritized. All resource requests coordinated through the Operational Area EOC will be evaluated using the priorities described in **Section 4**.

The standard ICS structure for field operations is described in the Operational Area EOP. Applications for specific functional areas are provided in **Annex A**.

3.1.1 Operational Area Emergency Operations Center

The Operational Area EOC will be activated during the earthquake with multiple incidents occurring simultaneously in the County. Incident Commanders and the appropriate ICS structures will be established for each incident, as described above. Each Incident Commander will communicate and report to the Operational Area EOC Operations Section until or unless the appropriate County DOCs are activated. See **Section 3.1.2** for a description of the function of a DOC and a list of County DOCs.

The Sheriff's Dispatch Center will act as a communications conduit between Incident Commanders and the EOC's Operations Section. The Sheriff's Dispatch Center will have no command authority over field operations—it is only a communications conduit. The Operational

Area EOC will provide policy direction directly to the Incident Commanders if the appropriate DOC is not activated.

3.1.2 Department Operations Centers

After the earthquake, County DOCs will be activated and will coordinate their activities with the Operational Area EOC. **Table 3-1** is a list of the DOCs that are likely to be activated in response to the earthquake. The roles of the DOCs that are listed in the table are described in **Annex A** under the ESF in which the department or agency participates. The corresponding ESF and tab in **Annex A** are listed in the table.

Table 3-1. Relationship Between Department Operations Centers and Emergency Operations Center

Department Operations Center	Emergency Operations Center Section/Branch/Unit	Applicable Emergency Support Function and Tab
Building Inspection	Public Works Branch	Public Works/Engineering, Tab 3
Education	Care and Shelter Branch	Mass Care, Tab 6
Environmental Health (though the Health Services DOC)	Medical Health Branch	Health/Medical, Tab 8
Fire	Fire and Rescue Branch	Firefighting, Tab 4 Urban Search/Rescue, Tab 9 Hazardous Materials, Tab 10
General Services	Logistics Section	Transportation, Tab 1 Logistics, Tab 7
Hazardous Materials (through the Health Services DOC)	HAZMAT Unit	Hazardous Materials, Tab 10
Health Services	Medical Health Branch	Public Works/Engineering, Tab 3 Medical/Health, Tab 8
Public Works	Public Works Branch	Transportation, Tab 1 Public Works/Engineering, Tab 3
Sheriff	Law Enforcement Branch	Public Safety, Tab 13

HAZMAT = hazardous materials

Although it is assumed that these departments will activate their DOCs for the earthquake, each department will make the decision independently. The protocols for activating agency DOCs are addressed in the Operational Area EOP and each department's emergency or disaster plan.

3.2 Continuity of Operations

The earthquake will cause damage to incident management facilities that are critical to the Operational Area response. Damage to the Operational Area EOC, DOCs, and other

jurisdictional and special district operation centers will affect the ability of the County, incorporated jurisdictions, and special districts to manage the response. Damage to critical infrastructure such as communication systems, power distribution, and water and wastewater systems will also affect the capabilities of these facilities.

To support local government response operations for the earthquake, the departments responsible for each of these facilities have identified business continuity and disaster recovery processes for systems, and backup locations from which to conduct operations.

3.2.1 Initial Staffing of the Emergency Operations Center

As described in **Section 2**, the Operational Area EOC will be damaged but functional. However, the effect of the earthquake on County employees and damage to transportation infrastructure will affect the ability of County employees to reach their posts, and will affect the ability of other organizations to provide liaisons to the EOC. Therefore, the EOC is expected to operate initially with reduced staff.

3.2.2 Space for Sustained Operation of the Emergency Operations Center

Conversely, the magnitude of the earthquake, the complexity of the response, and the volume of out-of-county resources that will respond will necessitate a significant increase in the size of the EOC staff. OES will arrange for additional space using the alternative locations outlined in the Operational Area EOP.

Over the long term (that is, beyond 30 days), operations will transition out of the Operational Area EOC as recovery proceeds. As appropriate, OES will work through the Logistics Section to procure leased space for the establishment of a Recovery Center to coordinate recovery operations.

3.3 Continuity of Government

The earthquake could result in the death or incapacitation of key government officials, the partial or complete destruction of established seats of government, and the destruction of public and private records essential for continued government operations.

Governments at all levels are responsible for providing continuity of effective leadership and authority, direction of emergency operations, management of recovery operations, and the provision of essential services. To this end, it is particularly essential that the county government incorporated jurisdictions, and special districts continue to function as government entities. California Government Code and the Constitution of California provide the authority for State and local governments to reconstitute themselves when incumbents are unable to serve.

The Operational Area EOP describes reconstitution of the governing body for Contra Costa County, the lines of succession, and the process for protecting County vital records. The plan for reconstituting the County government will be implemented for the earthquake, as needed.

3.4 Information Sharing

To ensure effective intelligence flow, emergency response agencies at all levels must establish communication system and protocols to organize, integrate, and coordinate intelligence among the affected agencies. The flow of situation reports among the levels of government should occur as shown below:

- **Field situation reports**: Field situation reports should be disseminated to each responsible jurisdiction EOC.
- **Local EOCs**: Local EOCs should summarize reports received from the field, DOCs, and other reporting disciplines and send to the Operational Area EOC.
- **Operational Area EOC**: The Operational Area EOC should summarize reports received from responsible jurisdictions EOC, field units, DOCs, and other reporting disciplines and forward to the REOC.
- **REOC**: If it is functional, the REOC should summarize situation reports received from the Operational Area EOC, State field units, State agency DOCs, and other reporting disciplines and forward to the State Operations Center (SOC) in Rancho Cordova.
- **SOC**: The SOC should summarize situation reports received from the REOC, State agency DOCs, and other reporting disciplines and distribute to State officials and others on the distribution list.
- **Joint Field Office (JFO)**: When the State-Federal JFO is activated, the REOC and SOC situation reports will be assimilated into the JFO situation report.

The types of information necessary for senior leaders, emergency managers, EOC staff, and Incident Commanders to understand the situation and make decisions regarding response priorities and resource allocations are described in **Annex B, Information Collection Plan**.

3.5 Internal Incident Management Coordination

Coordination among Contra Costa County government agencies for incident management is described below.

3.5.1 Activation of the Operational Area Emergency Operations Center

General activation of the Operational Area EOC is described in the Operational Area EOP. For the earthquake, the Operational Area EOC will be activated immediately and will function as described in the EOP. As described above, initial operation will be constrained by disruption to communications systems, delays in the arrival of EOC staff and representatives of other agencies, and the loss of services such as power, potable water, and wastewater.

The organization of the EOC is described in the Operational Area EOC. The ESFs described in this plan correlate to the elements of the EOC as described in **Table 3-2** below.

Table 3-2. Relationship of Emergency Support Functions to Emergency Operations Center Elements

Emergency Support Function	Applicable Emergency Operations Center Elements
ESF 1 – Transportation	Transportation Branch, Logistics Section Transportation Conditions Unit, Situation Analysis Branch, Plans/Intelligence Section
ESF 2 – Communications	Communications Branch, Logistics Section
ESF 3 – Public Works and Engineering	Public Works Branch, Operations Section Damage Assessment and Critical Infrastructure units, Situation Analysis Branch, Planning/ Intelligence Section Utilities Branch, Planning/Intelligence Section Utilities Branch, Logistics Section
ESF 4 – Firefighting	Fire/Rescue Branch, Operations Section
ESF 5 – Emergency Management	Command and General Staff and all sections
ESF 6 – Mass Care, Emergency Assistance, Housing, and Human Services	Care/Shelter Branch, Operations Section Animal Services Unit, Law Enforcement Branch, Operations Section
ESF 7 – Logistics Management and Resource Support	Supply/Procurement Branch and Personnel Branch, Logistics Section
ESF 8 – Medical and Health Services	Medical Health Branch, Operations Section
ESF 9 – Urban Search and Rescue	Fire/Rescue Branch, Operations Section
ESF 10 – Oil and Hazardous Materials Response	Hazardous Materials Unit, Medical Health Branch, Operations Section
ESF 11 – Agriculture and Natural Resources	Animal Services Unit, Law Enforcement Branch, Operations Section
ESF 12 – Energy	Utilities Branch, Logistics Section Utilities Branch, Plans/Intelligence Section Supply/Procurement Branch, Logistics Section
ESF 13 – Public Safety and Security	Law Enforcement Branch, Operations Section
ESF 14 – Long-Term Community Recovery	Recovery Branch, Finance/Administration Section Advance Planning Branch, Plans/Intelligence Section
ESF 15 – External Affairs	Public Information Officer

ESF = Emergency Support Function

3.5.2 Coordination Between the Emergency Operations Center and Department Operations Centers

When County departments have activated their DOCs, Incident Commanders will report to the appropriate DOC. The DOCs will consolidate information from the field and provide it to the appropriate Operational Area EOC Operations Section Branch Coordinator. See **Table 3-1** above for coordinating relationships.

The appropriate Operational Area EOC section/branch/unit will coordinate with the corresponding DOC(s) to obtain information for advance planning, logistical needs, available personnel and equipment resources, and other information as required. The DOCs will assist the Operational Area EOC in supporting field operations.

Coordination between specific DOCs and the corresponding Operational Area EOC section/branch/unit is described in more detail in the relevant tabs in **Annex A**.

3.6 External Incident Management Coordination

The magnitude of the impacts resulting from the earthquake will overwhelm the Operational Area response and require the assistance of other jurisdictions outside the Operational Area. Effective coordination with these governments will be vital in conducting response operations. This coordination is described below.

3.6.1 Coordination with Incorporated Jurisdictions

After the earthquake, all efforts will be made to establish direct communications and coordination between the Operational Area EOC and the activated EOCs of incorporated jurisdictions in the Operational Area. Additionally, as time permits, communications will be established with other incorporated jurisdictions that have not activated their EOCs. Initially, communications should be established using any functioning communication method and to whoever is available, regardless of their role in the EOC. Ideally, communications and coordination between EOCs will occur along functional lines.

Because of the damage to communications systems from the earthquake, it may be beneficial for each incorporated jurisdiction that has activated its EOC to send a liaison to the Operational Area EOC to facilitate a coordinated response.

3.6.2 Coordination with Special Districts

The emergency response role of special districts is generally focused on their normal services or functional area of responsibility. During disasters, some types of special districts will be more extensively involved in the emergency response by directly coordinating, communicating, and assisting local governments. Special districts that are likely to play a major role in the response to the earthquake include:

- Fire protection districts
- Water and wastewater districts
- Transit agencies
- School districts

In the Contra Costa Operational Area, relationships with special districts and the local governments must account for overlapping boundaries. The special districts that serve more than

one local government or serve the County's unincorporated areas will coordinate and communicate directly with the Operational Area EOC.

Ideally, a special district involved in the emergency response will have an agency representative at the Operational Area EOC to develop a coordinated response with agency representatives of other special districts and incorporated jurisdictions in the Operational Area EOC. If a special district is unable to send an agency representative, the Liaison Officer in the Operational Area EOC will be responsible for establishing communications and coordinating with the special district.

3.6.3 Coordination with Cal EMA

Cal EMA is responsible for coordinating the State agency response, providing State agency resources to meet needs identified by the Operational Areas, and requesting Federal resources through FEMA. Coordination with Cal EMA is described in the Operational Area EOP. Earthquake-specific elements are described below.

3.6.3.1 Coordination with the Regional Emergency Operations Center

In accordance with SEMS, coordination and communications with the REOC is intended to facilitate the request of, and acquisition of, resources to fill gaps in the Operational Area's capabilities. However, the earthquake will initially disrupt this mechanism.

Methods of communication are as follows:

- **Primary Method:** The Operational Area EOC and the REOC will coordinate through various telecommunications systems (described in the communications annex of the Operational Area EOP and in **Annex A, Tab 2**). The primary conduit is the Response Information Management System (RIMS), which is managed by Cal EMA.
- **Alternate Method:** The REOC will send a field representative to the Operational Area EOC.

Coordination and communications with the REOC will occur between the Command Staff and between the applicable, respective section and/or branch (that is, the Care and Shelter Branch in the Operational Area EOC will coordinate with the Care and Shelter Branch in the REOC). Additionally, direct coordination and communications will be established between the Operational Area Mutual Aid Coordinators (located in the Operational Area EOC) and the Region II Mutual Aid Coordinators. Depending on the situation and the mutual aid system, Mutual Aid Coordinators may deploy to and operate from their respective Operational Area EOC or agency DOC.

As described in Section 2, the REOC may be damaged or inaccessible and initially may be non-functional. The Regional Duty Officer will assume REOC functions until activation of the alternate REOC. In the event that an alternate REOC cannot be established in the Coastal Region, the Duty Officer will work with the Cal EMA Executive Duty Officer to identify an

alternate REOC outside the region. The Regional Duty Officer will provide the Operational Area EOC with contact information for the alternate REOC as soon as possible.

3.6.3.2. Coordination with the State Operations Center

The Operation Area EOC will initially coordinate with the State Warning Center at the SOC in Rancho Cordova. The Operational Area EOC will provide the State Warning Center and the SOC, once it is activated, with situation reports and requests for required resources. Once the REOC is operational, the Operational Area EOC will coordinate directly with the REOC. Cal EMA may provide a liaison to the Operational Area EOC to facilitate coordination. If the REOC or alternate facility in not activated as described above, the Operational Area will continue to coordinate directly with the SOC.

3.6.4 Non-Governmental and Private Sector Entities

NGOs, non-profit entities such as hospitals, and for-profit entities will play a major role in the response. Coordination with these entities is outlined below.

3.6.4.1 Non-Governmental Organizations

NGOs, including voluntary, community-based, and faith-based organizations are a critical part of the Operational Area's coordinated response to disasters. Major functions include:

- Operating shelters
- Operating mass feeding operations
- Assisting individuals with access and functional needs
- Supporting re-unification of families
- Providing resources to address unmet needs, including clothing and housing
- Supporting animal care, including supplies, medical care, transportation, and rescue

Examples of NGOs that will provide significant services following the earthquake include:

- American Red Cross Bay Area Chapter
- Contra Costa Crisis Center, which provides countywide information and referral for community services and housing assistance
- Greater Richmond Interfaith Program, a Richmond network of churches that provides services to residents of West County
- Regional Center of the East Bay, which provides support for people with physical disabilities
- Las Trampas, which provides support for people with developmental disabilities
- Shelter, Inc, a network of homeless shelters and programs
- Volunteer Center of the East Bay, which coordinates spontaneous volunteers

These organizations and others will mobilize volunteers and other resources through their own systems. The American Red Cross will provide staff to support the Care and Shelter Branch in the Operational Area EOC. Other organizations may provide liaisons at the Operational Area EOC or the appropriate Department's DOC when activated.

3.6.4.2 Private Sector Entities

Private sector entities:

- Are responsible for critical components of the response, such as the operation of hospitals, ambulance services, power and natural gas distribution
- Provide significant resources through existing and emergency contracts, such as transportation, fuel, water, and other commodities
- Donate commodities that are critical to sustaining the population, such as food, clothing, and water
- Play a critical role in encouraging recovery by resuming retail operations and other activities

There is no formal mechanism for coordinating with private sector entities. Where applicable, coordination with private sector entities that play a role in specific functions are described in relevant tabs to **Annex A**.

3.6.5 Multi-Agency Coordination Groups

As required, organizations participating in the Operational Area response will form Multi-Agency Coordination (MAC) Groups to support response operations, set priorities, prioritize resources, and resolve issues. MAC Groups may be formed in the Operational Area EOC or environment or separately, depending on the purpose and members of the group; and may involve, County, city, special district, State, Federal, non-governmental, and private sector entities. Potential functions that may require formation of MAC Groups include:

- Care and shelter
- Provision of water
- Provision of fuel
- Debris operations
- Interim housing

3.7 Integration of State and Federal Resources

In response to requests to the State for assistance, the Contra Costa Operational Area can expect an influx of assistance from the State, other states, and the Federal government. This assistance will be provided in the form of personnel, equipment, and commodities. The Operational Area EOC must integrate these resources into the response. Where applicable, potential resources that

the Operational Area may request in response to the earthquake are identified for specific functional areas in **Annex A**.

3.7.1 Requests for State and Federal Resources

In accordance with SEMS, the Operational Area EOC makes requests for State and Federal assistance to Cal EMA through the processes described in **Section 3.6** above. Cal EMA then determines the appropriate resources (which may be State, out-of-state, or Federal resources) that are best suited to meet the needs. In accordance with the State Emergency Plan and the Stafford Act, Cal EMA makes requests to FEMA for Federal assistance to meet these needs when necessary.[3] In no instance does the Operational Area (or jurisdictions within the Operational Area) request assistance directly from the Federal government.

3.7.2 Notification, Planning, and Logistical Support

As described in the CONPLAN, Cal EMA and FEMA will operate from the SOC and from the State-Federal JFO. Cal EMA is responsible for notifying the requesting entity (in general, the Operational Area EOC) when a request for assistance is being met with State, out-of-state, or Federal resources and providing information regarding type, arrival, and requirements for support, if any. The Operational Area EOC will identify the appropriate DOC or Incident Commander with whom the deployment of the resource must be coordinated. It is incumbent on the arriving resources to "check in" with the Operational Area EOC, DOC, or Incident Commander upon arrival.

In general, State and Federal teams will arrive with their own equipment and supplies necessary to complete the missions to which they are assigned. However, it may be necessary for the Operational Area to provide support, such as staging area locations, access to damage sites, and security. The Operational Area EOC will coordinate with Cal EMA and, if appropriate, Division Supervisors (see below) to identify these requirements. Refer to **Annex A, Tab 7** for details regarding logistical support.

3.7.3 Command and Control of State and Federal Resources

Integration and utilization of resources will be accomplished through unity of effort. In general, State, out-of-state, and Federal resources are integrated into the Incident Command at the field level. Some resources, such as commodities, are placed under the control of the field-level Incident Command. However, certain Federal resources are deployed under the control of the JFO, which is responsible for integration and utilization of these resources down to the field level. Examples include:

[3] In cases where a Federal agency is operating under an authority other than the Stafford Act, another State agency may responsible for coordinating Federal assistance. For example, the California Department of Transportation is responsible for coordinating with the Federal Highway Administration (FHWA) for assistance under the Emergency Relief Program, through which FHWA provides assistance with debris removal and repairs of damage on Federal-aid routes.

- Federal resources acting at a national or regional level, such as transportation assets for moving Federal supplies into the region
- Resources carrying out Federal responsibilities, such as housing inspectors assessing damage under the Individual and Households Program

Additionally, U.S. Department of Defense and California National Guard elements carrying out missions remain under the control of the Secretary of Defense and the Governor, respectively, and their operations in the field are directed by one or more Task Forces or Joint Task Forces operating under proper State and Federal authority. In these situations, however, unit commanders responsible for the movement of resources will coordinate their actions with the field-level Incident Command.

3.7.4 Coordination by Federal and State Division Supervisors

As described in the CONPLAN, FEMA and Cal EMA may deploy Division Supervisors to support integration and utilization of resources at the local level. The Division Supervisors deploy to the Operational Area EOC and coordinate with the EOC Director. The Division Supervisors provide a mechanism to support local operations by:

- Assessing the severity of the earthquake
- Providing clarification with regard to resource requests, where necessary
- Providing a point of coordination for logistics associated with deployed State and Federal resources, including a point for verification of State and Federal resources deployed to the Operational Area
- Ensuring integration and utilization of resources at the field level
- Providing a consistent point of contact for other State and Federal liaisons and agency representatives

In accordance with SEMS, the Division Supervisors do not serve as a conduit for resource requests to the State or Federal governments. As described above, all resource requests from the Operational Area EOC proceed through the appropriate channel to Cal EMA.

Section Four: Phased Objectives for Response

The purpose of this section is to provide the framework for operations for the first 30 days after the earthquake. Accordingly, this section provides:

- Priorities for response
- Objectives that support those priorities

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

- E to E+72 hours
- E+72 hours to E+14 days
- E+14 days to E+30 days

The objectives are not strictly tied to the phases (operational time frames) but are generally associated with them and may occur throughout the incident timeline.

Response timelines are included in **Annex A** for each ESF. The response timelines include:

- Tasks to be performed
- Decision points
- Responsible entities, including the elements within the Operational Area EOC and County departments
- Other events that may occur during the response period that can affect response activities in the Operational Area, such as actions taken by the State and Federal governments

4.1 Priorities for Response

The following overarching priorities will govern resource allocation and response strategy for the Operational Area after the earthquake.

- **Save lives:** The preservation of life will be the top priority of emergency managers and first responders and takes precedence over any and all other considerations.
- **Diminish suffering:** Beyond the preservation of life, all possible efforts must be made to diminish suffering by providing basic human needs, including medical care, food, water, shelter, and security.
- **Protect property:** All possible efforts must be made to protect public and private property from damage due to the earthquake itself and secondary hazards resulting from the earthquake.
- **Protect the environment:** All possible efforts must be made to minimize damage to Contra Costa County's environment.
- **Restore basic services:** Power, sanitation, public transportation, law enforcement, fire, medical, and other basic services must be restored as quickly as possible to enable communities to resume their normal patterns of life.

4.2 Objectives for Response

Objectives for the response during the first 30 days after the earthquake are provided below. These objectives will provide Incident Commanders, the Operational Area EOC, State and Federal agencies, and others with an outline of the manner in which the Operational Area intends to prioritize limited resources during the response. The operations described in **Annex A** reflect these objectives.

4.2.1 Initial Response: E to E+72 Hours

Operational objectives for the initial response phase are:

- **Save lives and protect public safety:** Fires and structural damage will require extensive structural firefighting and search and rescue resources. Law enforcement resources will be necessary to conduct life-safety operations and meet security and public order requirements.
- **Conduct initial impact assessment:** Situational awareness will be critical for effective decisions. Initially, it will be necessary to collect information regarding the impact of the earthquake through eyewitness accounts, first responders, 911 calls, and mechanisms. As resources qualified to conduct more detailed assessments become available, these resources will be used to gather information in a more comprehensive manner.
- **Activate Incident Command System**: The activation of the EOC and supporting DOCs will be critical to coordinate the resources necessary for response to the numerous incidents resulting from the earthquake.
- **Establish emergency communications:** Activation and deployment of emergency communications assets will be necessary to support incident response organizations and to reestablish emergency management communications within the County.
- **Provide emergency medical care**: It will be necessary to mobilize medical staff and supplies to supplement medical response resources and to evacuate injured populations and patients who cannot be treated appropriately, given the available resources within the County.
- **Alert, inform, and reassure the public:** Public messaging will be required to provide alert, warning and public notification information and to reassure the County population of the government's ability to satisfy the needs of the public. It will be necessary to use a variety of methods, including the Community Warning System, due to the disruption to communications systems; and to establish a Joint Information Center for effective coordination.

4.2.2 Sustained Response: E+72 Hours to E+14 Days

Operational objectives for the sustained response phase are:

- **Sustain medical and public health systems:** Damage to hospitals, other healthcare facilities, medical laboratories, and utility systems in addition to shortages of medical and

health supplies and personnel will limit Operational Area capabilities to treat the injured and care for the medically fragile, shelter populations, and those in long-term care facilities. It will be necessary to request resources to establish Field Treatment Sites, Alternate Care Sites, and other mechanisms for treatment, to assess the condition of hospitals and other healthcare facilities, and to sustain public health capabilities.

- **Establish lines of supply and transportation:** Movement of response resources into affected areas of the County and movement of populations out to find care and shelter or interim housing will be significantly affected by damage to transportation infrastructure. It will be necessary to reestablish and maintain land, sea, and air routes to move first responders and other resources in and the injured and evacuees out.
- **Provide care and shelter for the affected population:** It will be necessary to activate shelters, feeding operations, and distribution of water and other supplies to sustain the population. Additionally, it will be necessary to care for thousands of displaced and abandoned companion animals.
- **Support reunification of families:** Families will be separated by the earthquake and will seek to be re-united. Additionally, owners of companion animals (including pets and service animals) may lose their animals or become separated from them during evacuations and sheltering.
- **Reduce hazards to the population:** Resources will be deployed to assess, respond to, mitigate, and eliminate threats to public safety, including HAZMAT spills and releases, debris, damaged structures, and other potential public health threats.
- **Conduct mass fatality operations:** Coroner resources will be deployed to establish capabilities to effectively locate, secure, recover, track, transport, store, process, identify, and facilitate the final disposition of human remains. With over 400 estimated fatalities, the earthquake will greatly exceed the Coroner's response capabilities. Additional resources from other counties through the Coroners Mutual Aid System, State agencies, and Federal agencies will be necessary to support mass fatality operations.

4.2.3 Transition to Recovery: E+14 Days to E+30 Days

Although the Plan timeline extends only through the first 30 days of the incident, operations will extend well 30 days.

Operational objectives are:

- **Support re-entry:** Efforts to facilitate the re-entry of County residents will be critical to supporting the long-term recovery of the County.
- **Provide interim housing for the displaced population:** It will be necessary to begin closing shelters. However, damage to housing and lack of available housing stock resources will prevent residents from returning to their homes, necessitating the development of interim solutions that can meet the needs of the displaced population until permanent housing can be reestablished.

- **Restore infrastructure and public services:** Massive damage to utility systems including potable water, wastewater, electrical generation and distribution, and natural gas, and impairments to other critical infrastructure facilities such as pipelines will require months or years to repair. Emergency repairs and temporary facilities will be necessary to restore services. Education, medical, social services, law enforcement, fire capabilities, and other government services will also need to be restored.
- **Establish temporary transportation capabilities:** Temporary transportation mechanisms will be necessary to mitigate damage to transportation infrastructure, particularly to roads, bridges, and the Bay Area Rapid Transit system. Reestablishing basic transportation services and facilitating the movement of recovery resources will be critical to the economic recovery of the County and the region.

Section Five: Plan Maintenance

Maintaining an accurate, applicable, and effective plan requires a systematic approach. This section identifies who has the authority and is responsible for updating the Plan, how often and by what means changes are made and communicated to the Plan recipients, and how the Plan is exercised and evaluated.

5.1 Plan Distribution

Table 5-1 lists organizations that will receive the Plan.

Table 5-1. Plan Distribution

County Board of Supervisors
County Departments
City of Antioch
City of Brentwood
City of Clayton
City of Concord
City of Danville
City of El Cerrito
City of Hercules
City of Lafayette
City of Martinez
Town of Moraga
City of Pinole
City of Pleasant Hill
City of Walnut Creek
City of Oakley
City of Orinda
City of Richmond
City of San Pablo
City of San Ramon
Special Districts as appropriate (e.g. School Districts, Fire Protection Districts, Water/Wastewater Districts)
American Red Cross
California Emergency Management Agency, Costal Region

5.2 Plan Updates

OES is responsible for making updates to the Plan. The Plan will be reviewed at a minimum on an annual basis, and any changes to the Plan will be documented in the Record of Change.

As resources permit, OES will implement Plan updates after the following events:

- A change in operational resources (policy, personnel, organizational structures, or leadership management process, facilities or equipment)
- A formal update of planning guidance or standards
- A change in elected officials
- Plan activations
- Major exercises
- A change to Operational Area demographics or hazard or risk profile
- The enactment of new or amended laws or ordinances

5.3 Plan Testing, Training, and Exercises

Assessing the Plan and determining its effectiveness involves employing the processes of staff training and readiness exercises and evaluation of performance with respect to actual events to determine whether goals, objectives, decision, actions, and timing outlined in the Plan led to a successful response.

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

Earthquake exercises will be conducted on a regular basis to maintain readiness and evaluate the effectiveness of the Plan. Exercises are most effective when as many Operational Area member jurisdictions and agencies as practical are included.

5.4 After-Action Review

After every exercise or event, an After-Action Report and Improvement Plan should be completed. The After-Action Report captures observations and recommendations based on incident objectives as associated with the capabilities and tasks. The Improvement Plan identifies specific corrective actions, assigns them to responsible parties, and establishes targets for their completion. OES is the lead agency for the development of the After-Action Report and Improvement Plan and will convene event participants to discuss action items and solicit recommendations for improvement.

Annex A:
Emergency Support Function Operations

See separate files for:

- Tab 1: ESF #1 – Transportation
- Tab 2: ESF #2 – Communications
- Tab 3: ESF #3 – Public Works and Engineering
- Tab 4: ESF #4 – Firefighting
- Tab 5: ESF #5 – Emergency Management
- Tab 6: ESF #6 – Mass Care, Emergency Assistance, Housing, and Human Services
- Tab 7: ESF #7 – Logistics Management and Resource Support
- Tab 8: ESF #8 – Public Health and Medical Services
- Tab 9: ESF #9 – Urban Search and Rescue
- Tab 10: ESF #10 – Oil and Hazardous Materials Response
- Tab 11: ESF #11 – Agriculture and Natural Resources
- Tab 12: ESF #12 – Energy
- Tab 13: ESF #13 – Public Safety and Security
- Tab 14: ESF #14 – Long-Term Community Recovery
- Tab 15: ESF #15 – External Affairs

Annex B: Information Collection Plan

See separate file

Annex C: Maps

See separate files for:

- **Map 1** Contra Costa County
- **Map 2** Hayward Earthquake Characteristics
- **Map 3** Liquefaction Susceptibility
- **Map 4** Communities Isolated by the Earthquake
- **Map A1-1** Functionality of Highways and Bridges
- **Map A1-2** Transportation Routes for Response
- **Map A3-1** Critical Facilities
- **Map A3-2** Delta Levee Damage
- **Map A3-3** Damaged Buildings
- **Map A3-4** Debris Estimates
- **Map A4-1** Functionality of Fire Stations, E+7 days
- **Map A7-1** Locations of Major Retailers
- **Map A7-2** Locations of FEMA-Designated Points of Distribution
- **Map A10-1** Areas of Potential Hazardous Materials Incidents
- **Map A13-1** Functionality of Police Stations, E+7 days