



2018 CUEA Annual Conference

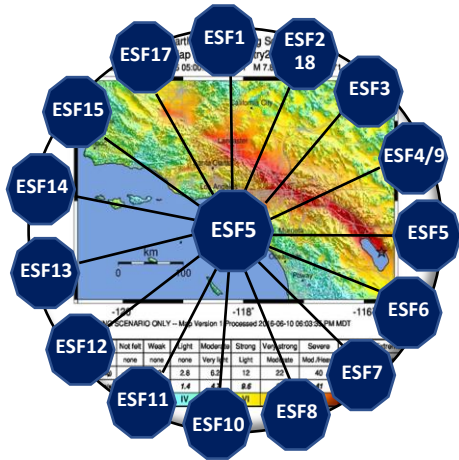
Informational Update Briefing

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Collaborative Planning Integration



State/Federal ESF “Support Concepts” helping formulate a unified community response for all twelve counties (Imperial, Inyo, Kern, Los Angeles, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, Tulare, Ventura and 41 Tribal Nations).

Informational Briefing Overview

- Purpose, Mission, Lead Planners Focus
- Planning Process – Where We Are Now
- Where We Go From Here
- Core Capability Analysis Fact Sheet Development
- Collaborative Planning Update Lines of Effort
- Threat / Risk SoCal Complex Fault System
- ESF Synchronization of Planning Factors
- Planning Relationships Across the Disaster Life Cycle
- Senior Leader Support Concept for Approval
- Operational Timeline and Operational Arc
- Operational Coordination Complexity
- Concept of Operation Operational Phases
- Initial Operational Support Structure (E through E+72)
- Operational Coordination – Data Collection Process
- Situational Assessment
- Operational Coordination Way Forward
- Base Operational Planning – Surface Access Corridor Concept
- Aviation Support Concept (Air Bridge) / Critical Lifelines Restoration
- Upcoming Event Schedule
- Training Gaps

Purpose

The purpose of this Information Coordination Briefing is to present the Senior Leaders of ESF 12/California Utilities Emergency Association (CUEA) with the results of the Joint Southern California Catastrophic Earthquake planning process to date and to better understand the planning factors, facts and assumptions, Mission Statement, Senior Leaders' Intent, Operational Phases, Core Capability Objectives and ESF Support Concepts.



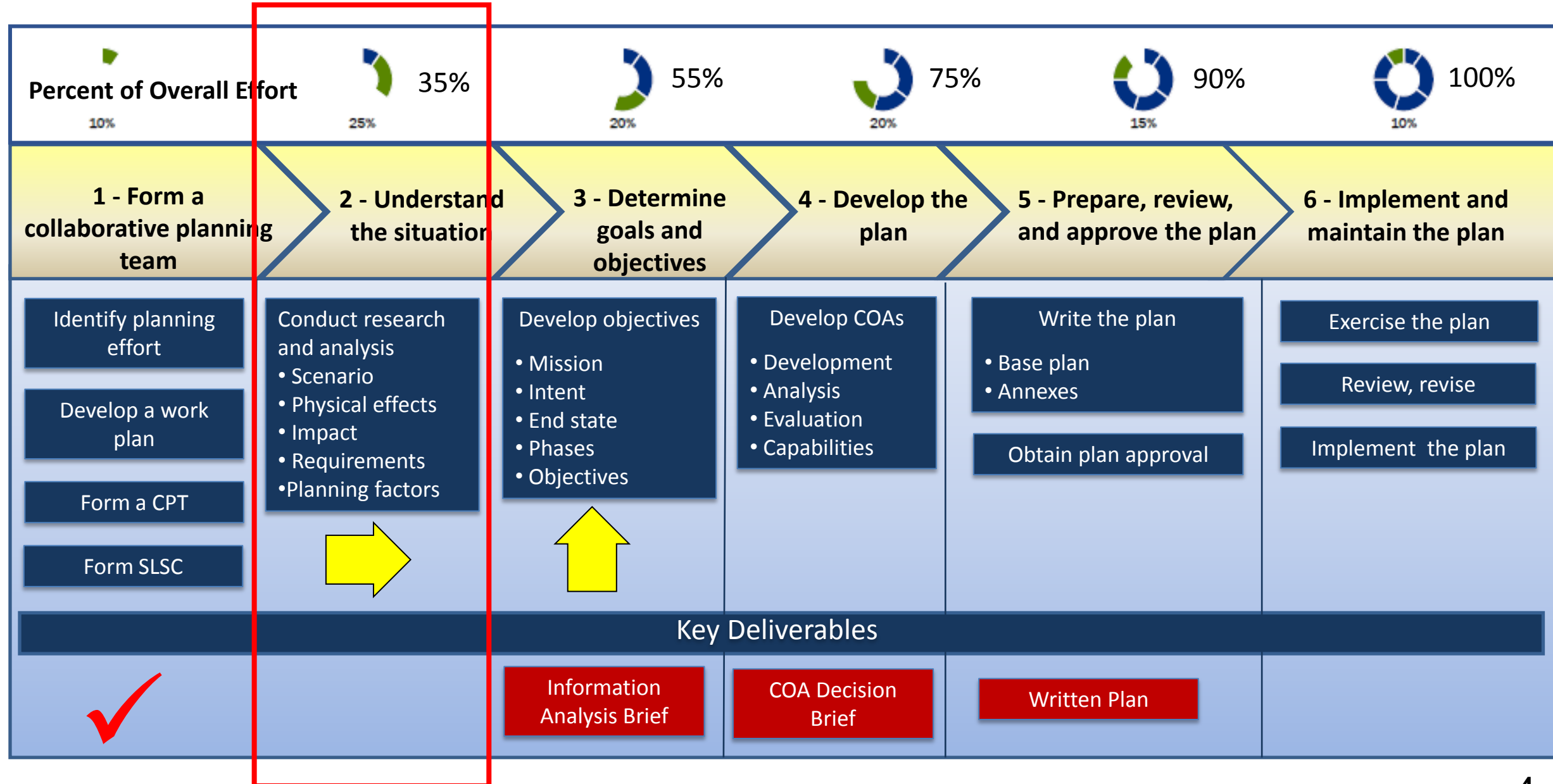
The Ask...

Mission

A joint unified effort of local, county, state, tribal, federal, private sector, and non-profits emergency response organizations to save and sustain life, minimize suffering, stabilize and restore critical infrastructure, and set the conditions for recovery.

Lead Planners Focus – Develop an operational/functional catastrophic plan that can be implemented in with no notice.

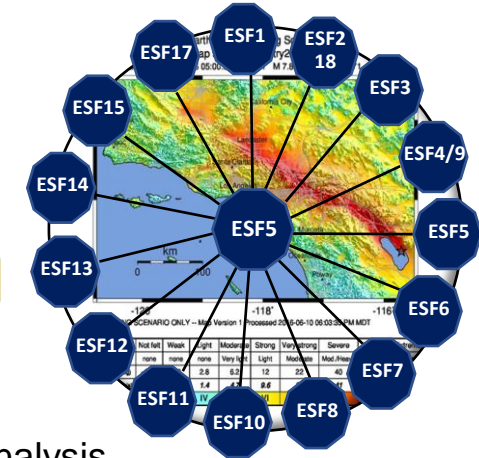
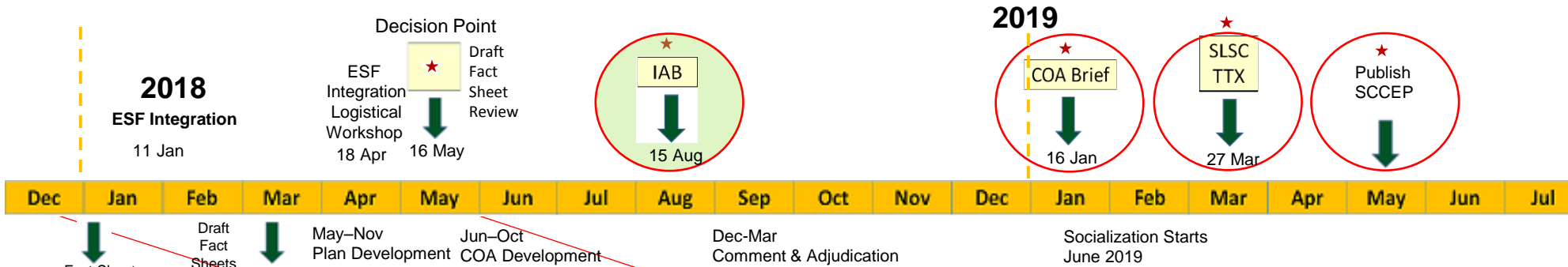
Planning Process—Where We Are Now



Where We Go From Here

Completing the Capability Based Analysis and Moving to Course of Action Development

Collaborative Planning Integration

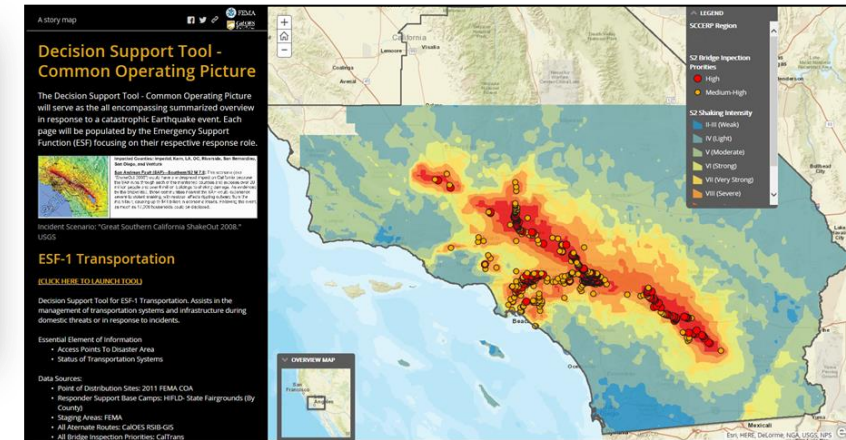


Capability Based Analysis

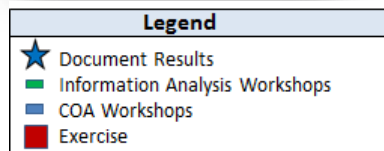
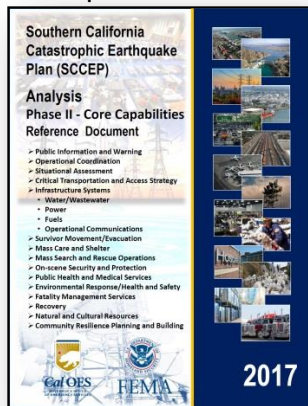
- Public Information and Warning
- Operational Coordination
- Situational Assessment
- Infrastructure Systems
 - Transportation and Access Strategy
 - Operational Communications
 - Water/Wastewater
 - Power
 - Fuels
- Survivor Movement/Evacuation
- Mass Care and Shelter
- Mass Search and Rescue Operations
- On-scene Security and Protection
- Public Health and Medical Services
- Environmental Response/Health and Safety
- Fatality Management Services
- Logistical Supply Chain
- Recovery
 - Economic Recovery
 - Health and Social Services
 - Housing
 - Infrastructure Systems
 - Transportation
 - Power
 - Water/Wastewater
 - Fuels
- Natural and Cultural Resources
- Community Resilience Planning and Building

Information Analysis Briefing

Link the planning effort to decision makers and data analysis to an actionable tool that can assist emergency management core support functions, improving overall response and support operations through an ArcGIS dataset interface.



CalOES/FEMA Planning Leads facilitate fact sheet development



Scenario (S2 – 7.8M San Andreas Fault Rupture Zone)

Core Capability Analysis Fact Sheet Development Laid out in the December 2017 Approved Work Plan

- A analysis by SMEs of system disruptions and emergency capabilities
- Format = white paper
- Summarizes:

1. **Operational impact** – vulnerabilities and potential failure points for systems supporting Southern California Mass Care and Shelter Support Concept.
2. **Planning factors** – Requirements to support communities and jurisdictions based on known and anticipated needs of Operational Areas, responsible organizations, and communities.

Developed for:

- Used to inform operational decisions and develop a factual basis for the plan.
- Analysis by experts ensures risk based approach to systems that support and sustain emergency managers and survivors.

Sources of Facts

- Old plan from 2011 – update needed (Focus Areas)
 - Operational Coordination
 - Survivor Movement & Evacuation / Mass Care and Shelter
 - Critical Lifelines Corridor Restoration Cajon Pass Workshop
 - Logistical Supply Chain & Commodity Movement Workshop
 - Long Term Recovery (SDRF/NDRF)
- Bay Area Earthquake Fact Sheets (data/example format)
- Scientific studies on catastrophic response/restorations/recovery operations.
- Best Practices and Lessons Learned (Catastrophic Response/Recovery)
- ESF Capabilities within the State, Private Sector and Federal to respond, mitigate, and support recovery operations.
- ESF FS – Coordinated Working Group SMEs to provide a Collaborated Multiagency Fact Sheet that identifies:
 - Mission, Purpose, Concept of Operations, Assumptions, Gaps, Constraints, Organizational Structure, Interdependencies, Critical Information Requirements
 - Resource phasing and Support Requirements
 - Sustainment/Recovery Operations

Capability Based Analysis

Fact Sheet Development

- Public Information and Warning
- Operational Coordination
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Senior Leader Outcomes

At the conclusion of IAB, decision makers will provide input on response and recovery operational support concepts to ensure sufficient planning was conducted for:

- Accurately Assessing the Situation
- Establishing Priorities
- Gaining Access to affected areas via multiple modes
- Conducting Life-Saving / Life-Sustaining Operations
- Facilitating Information Sharing
- Expediting Environmental Compliance
- Restoration of critical lifelines and affected Communities

Moving forward to Course of Action (COA) Development

Collaborative Planning Update Lines of Effort

Planning Effort/Enhancements to Existing 2011 Catastrophic Plan



Outcomes/Improvements:

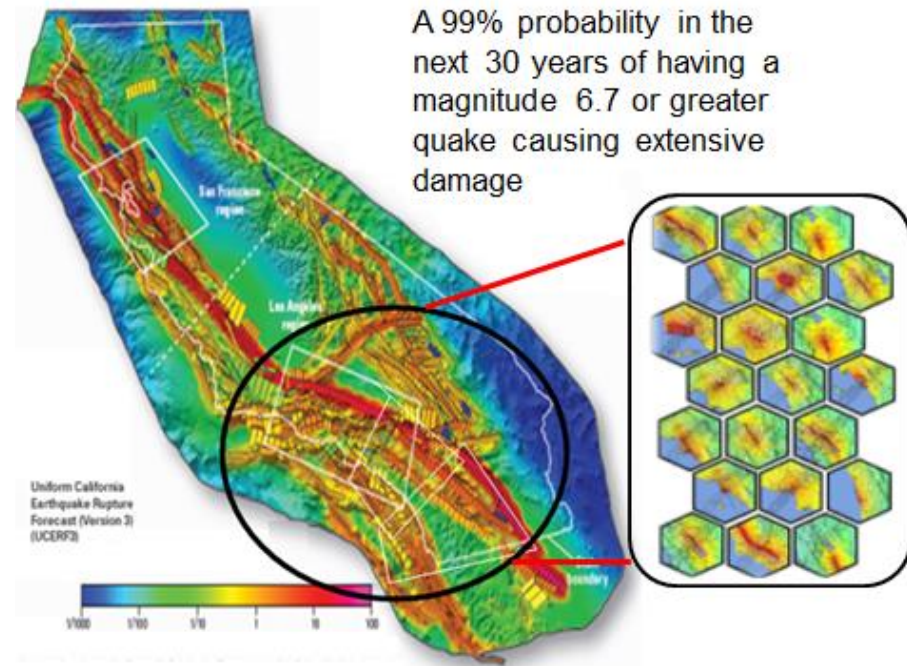
- **Operational Coordination Workshop**
 - Initial Operational Structure/Consensus
 - Geographic Operational Branches/Divisions
- **Survivor Movement & Evacuation / Mass Care and Shelter Workshop**
 - Law Enforcement Leads/Coord. ESF13/1/6/7/12
 - Support Concept (Gen. Pop/Medical/Animal)
 - Support Concept (Shelter, Feeding, AFN)
 - Need for High Density Shelter Manager Training
- **Critical Lifelines Corridor Restoration Cajon Pass Workshop**
 - Operational Support Structure/Consensus
 - Cajon Pass Critical Information Requirements
 - Port of LA/LB Executive MAC Group T&E
- **Logistical Supply Chain & Commodity Movement Workshop**
 - OA Priorities, Objectives, Critical Needs
 - Throughput Coordination ESF7/1/OAs
 - Planning for State/Federal SA/RSB/ISBs
- **Long Term Recovery (SDRF/NDRF) Workshop**
 - Incorporate lessons learned and best practices
 - Develop RSF Annexes for the SDRF/Fact Sheets

Scenario (S2 – 7.8M San Andreas Fault Rupture Zone)

SoCal Complex Fault System

Threat/Risk – UCERF 3

21 Separate Fault Rupture Zones



S1- Verdugo Fault M 6.7

S2 - San Andreas Fault (SAF)—Southern M 7.8

S3 - Chino Hills Fault M 6.7

S4 - San Joce—Carro Prieto Fault M 7.0

S5 - Hosgri Fault M 7.5

S6 - Elsinore-Julian Fault M 7.1

S7 - North Channel Slope Fault M 7.4

S8 - Puente Hills Fault M 7.1

S9 - San Joaquin Hills Fault M 6.6

S10 - Elsinore Fault M 6.8

S11 - Raymond Fault M 6.5

S12 - Whittier Fault M 6.8

S13 - Imperial Valley Fault M 7.0

S14 - SAF Coachella Valley Fault/S14 M 7.1

S15 - SAF Southern Fault M 7.4

S16 - San Jacinto Fault M 6.7

S17 - Newport-Inglewood Fault M 6.9

S18 - Palos Verde Fault M 7.1

S19 - Santa Monica Fault M 6.6

S20 - Rose Canyon Fault M 6.9

S21 - SAF (1857 Rupture) M 7.8

California Geological Survey, U.S. Geological Survey, and Southern California Earthquake Center, *UCERF3: A new Earthquake Forecast for California's Complex Fault System*, 2015 has identified a 99.7% chance of having a magnitude 6.7 or larger earthquake during the next 30 years, on faults near Los Angeles, California. The probability of an earthquake of this magnitude on the southern segment of the San Andreas Fault in the next 30 years is 78%.

The primary scenario for the Southern California Catastrophic Earthquake Plan is a 7.8 magnitude (M) on the Southern San Andreas Fault (SSAF). The epicenter is N33.35 W115.71, depth 7.6 km. The fault extends from the Salton Sea in Imperial County and continues northwest to LA County. The size and intensity of this earthquake is estimated at 50 times great than the Northridge Earthquake experienced in 1994.

Loss Estimation Modeling for Situational Planning Analysis

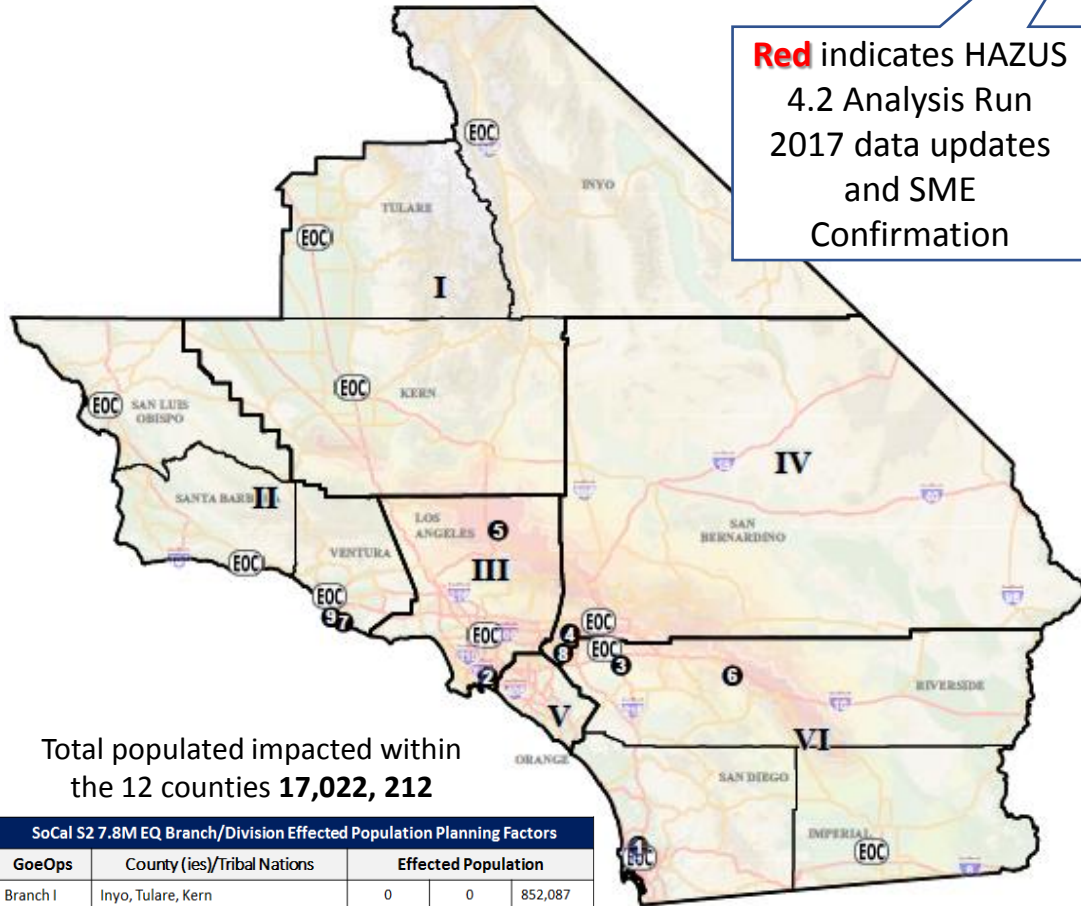
- 177,858 injuries, 12,750 deaths
- 1,046,534 buildings will be at least moderately damaged
- 186,167 displaced households (~ half need extended shelter)
- \$232 billion of damages

The damage is compounded by fires that occur due to downed wires and ruptured gas/fuel lines. Firefighters may experience a minimum of 1,600 ignitions that will burn approximately 1.13 square miles of the regions total area. Fires will displace approximately 10,220 people and burn about 767 (millions of dollars) of building value. Their task is made much more difficult because debris caused by landslides, damaged buildings, roads and power lines is blocking many of the roads and access points they need to reach the fires. In other cases normal traffic causes gridlock as people try to reunite with their families during the work day. Finally, in addition to the obstacles mentioned above, many of the water mains are ruptured or damaged so firefighters have to rely on alternate sources of water to fight the fires.

Base Operational Planning Map

Geographic Operations Summary of Shaking Intensity Total Population Impacted

Shaking Intensity	Imperial	Inyo	Kern	Los Angeles	Orange	Riverside	San Bernardino	San Diego	San Luis Obispo	Santa Barbara	Tulare	Ventura
V (Moderate)	74,491	0	211,589	465,372	574,618	406,184	45,361	10,900	0	8	0	305,893
VI (Strong)	7,266	0	552,407	1,187,756	189,903	237,519	25,467	2,453	0	0	0	142,257
VII (Very Strong)	7,410	0	56,472	2,382,818	452,202	513,416	25,701	0	0	0	0	3,744
VIII (Severe)	6,724	0	6,025	2,776,653	885,116	628,300	558,308	0	0	0	0	0
IX (Violent)	315	0	17,263	2,142,937	937,162	293,788	1,119,716	0	0	0	0	883
X (Extreme)	37	0	8,331	1,121,075	80,491	283,300	359,419	0	0	0	0	0
Total Affected	95,891	0	852,087	10,076,611	3,119,492	2,362,507	2,137,972	13,353	0	8	0	502,271



Total populated impacted within the 12 counties **17,022, 212**

SoCal S2 7.8M EQ Branch/Division Effected Population Planning Factors				
GoeOps	County (ies)/Tribal Nations	Effected Population		
Branch I	Inyo, Tulare, Kern	0	0	852,087
Branch II	SLO, Santa Barbara, Ventura	0	8	502,271
Branch III	Los Angeles	10,076,611		
Branch IV	San Bernardino	2,137,972		
Branch V	Orange	3,119,492		
Branch VI	Riverside, San Diego, Imperial	2,362,507	13,353	95,891
Branch VII	Tribal Nations	* 161,970		

* Tribal numbers included in county roll-up

ESF Synchronization – Planning Factors

- Geographic Operations Summary of Shaking Intensity Total Population Directly Impacted **17,022,212**
- **12,750** deaths
- **177,858** injuries
- **1,046,534** buildings significantly damaged
- **1600** ignitions requiring a fire engine, **1,200** exceed capability of first engine
- **45,000** rescues
- **225,000** individuals require mass care and shelter, (40% increase, which can account for aftershocks, fire, etc.) to include those with access, functional and other special support needs of 25% (56,250). This also includes -7% (15,750+) toddlers and infants.
- Large portions of the critical infrastructure (trans., comm.'s, power, water/ wastewater/fuels/pipeline likely to be damaged or destroyed.
- **2.5 million** individuals shelter-in-place and need basic resource support (e.g., food and water)
- **1,000,000** displaced pets/**269,500** needing shelter
- Target evacuation population **1,005,000** based on assessment of risk.
- 80% of population will likely self-evacuate. Remaining 20% (up to **200,000**) will require assistance.
- Approximately 25% of major airports may not be immediately available for operations.
- Fire/Rescue/Airlift operations will be impacted by weather smoke and hazardous materials conditions.
- EQ will have immediate impact rail operations for the first 48hrs.
- Day Vs Night Response (add 4-8hrs)
- Regional ESF impacts to response/support efforts due to lose of staffing
- Local/State/Federal response and support agencies will implement Continuity Plans will impacted area
- **\$232 billion** damages

Operational Phase 2a - b

Assumptions based on planning factors:

- Catastrophic S2 7.8M EQ Down the Southern San Andres Fault Rupture Zone .
- Availability of response personnel may be significantly compromised
- Gov. Proclamation immediate/POTUS Declaration follows
- Many people will be unaccounted for
- Large numbers of fatalities expected
- Critical lifeline restoration hampered by debris

Assumptions change to facts each operational period

Tier One Capabilities(E + 24):

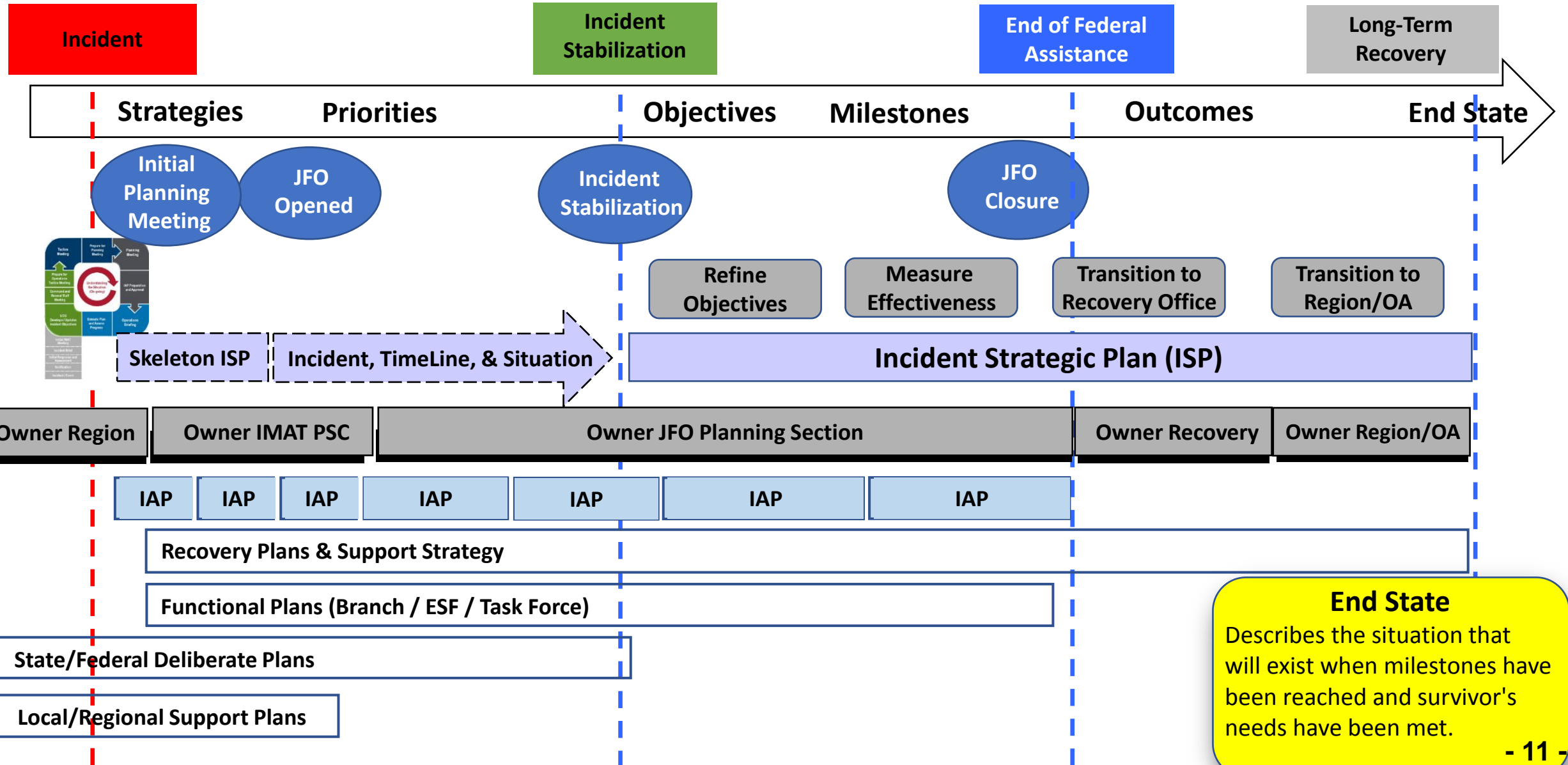
- Initiate evacuation/survivor movement opns
- Move populations out of the affected areas
- Move emergency services/critical lifeline restoration workers into the affected areas
- Establish ingress and egress routes
- Use contra flow plans as necessary
- Provide security and logistics necessary for evacuation, patient movement, and mass care
- Establish emergency supply routes and acquire and/or deliver resources
- Provide information collection plan - EEs flow in a timely and synchronized effort

Gaps:

- EMS survivor mvt (triage, transport, care)
- Sufficient high density shelters with qualified staff/includes small/large animals
- Mobile Pharmacy capabilities
- Collaborated response/utility spt bases
- Logistical supply chain commodity mvt.

Provide an Operational and Functional Planning Process

Planning Relationships Across the Disaster Life Cycle



Senior Leader Support Concept for Approval

Event Priorities

- Operational communications with regions, operational areas, and support organizations that are activated.
- Maintain situational awareness of threats, impacts, operational area needs.
- Accountability and safety of all emergency management and field staff.
- Level MAC Groups/TF decision making process to prioritize, allocate and critical scare resources.

Management Objectives

- Prepare for changing conditions in a dynamic situation and be prepared to adjust plans.
- Keep cost commensurate with values at risk.
- Provide public with key information, maintain positive public relations.

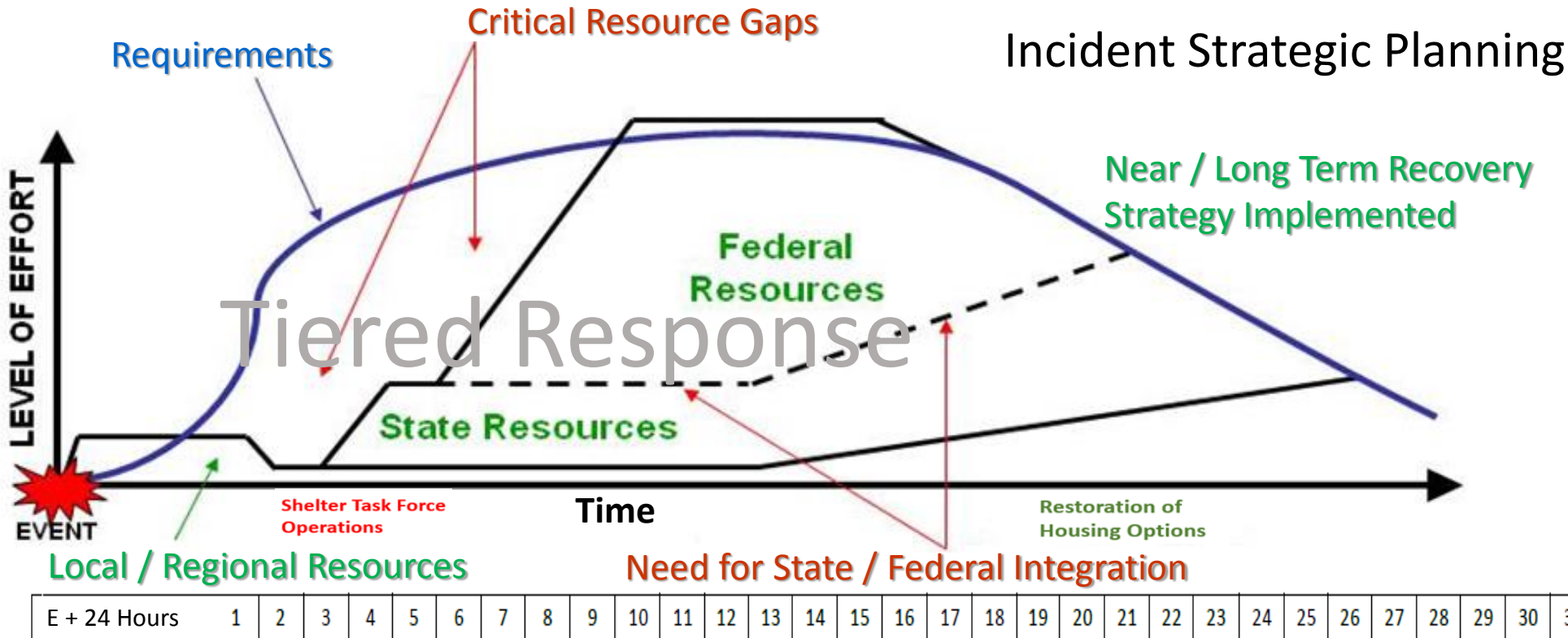
SoCal Catastrophic EQ Plan Control Objectives by Operational Phase

Phase 2a Activation and Immediate Response	Phase 2b State/Federal Resources are Deployed	Phase 2c Sustained Response	Phase 3 Long Term Recovery
<ul style="list-style-type: none"> • Firefight Response -- Protect Life, Property, and the Environment in the Impacted Areas • Support Mass Search and Rescue Operations • Support Evacuation and Survivor Movement • Support/Sustain Shelter Operations/AFN Unmet Needs • Assess/Identify critical infrastructure impacts and restoration • Provide Joint Coordinated Information & Messaging • Assess Medical Facilities and Schools • Support Debris Clearance and Removal Operations to gain Access for Critical Resources/Commodity Distribution 	<ul style="list-style-type: none"> • Firefight Response - Protection of Life and Property, and the Environment in the Impacted Areas • Support/Sustain Mass Search and Rescue Operations • Sustain Shelters and Support Repopulation Operations • Restoration of Critical Lifelines/Support Facilities and Conveyance Systems • Establish/Sustain Supply Chain Commodity Distribution • Establish/Sustain Debris Management Operations and Watershed Mitigation • Support Housing and School Unmet Needs/Solutions • Provide Joint Coordinated Public Information • Recovery Strategy Buildout 	<ul style="list-style-type: none"> • Protect Life, Property, and the Environment in the Impacted Areas • Restoration/Repair of Critical Lifelines/Support Facilities • Implement Transitional Sheltering Assistance and Short/Long-Term Housing and Schools Solutions • Support/Sustain Debris Management Operations and Watershed Mitigation • Provide Joint Coordinated Public Information • Implement Short/Mid-Term Recovery Strategy 	<ul style="list-style-type: none"> • Protect Life, Property, and the Environment in the Impacted Areas • Implement Transitional Sheltering Assistance and Short/Long-Term • Support Housing and School Solutions • Support Temporary Facilities/Repair of Critical Infrastructure Facilities • Support/Sustain Debris Removal Operations and Watershed Mitigation • Coordinate Joint Public Information • Implement Long-Term Recovery Strategy

Operational Timeline and Operational Arc

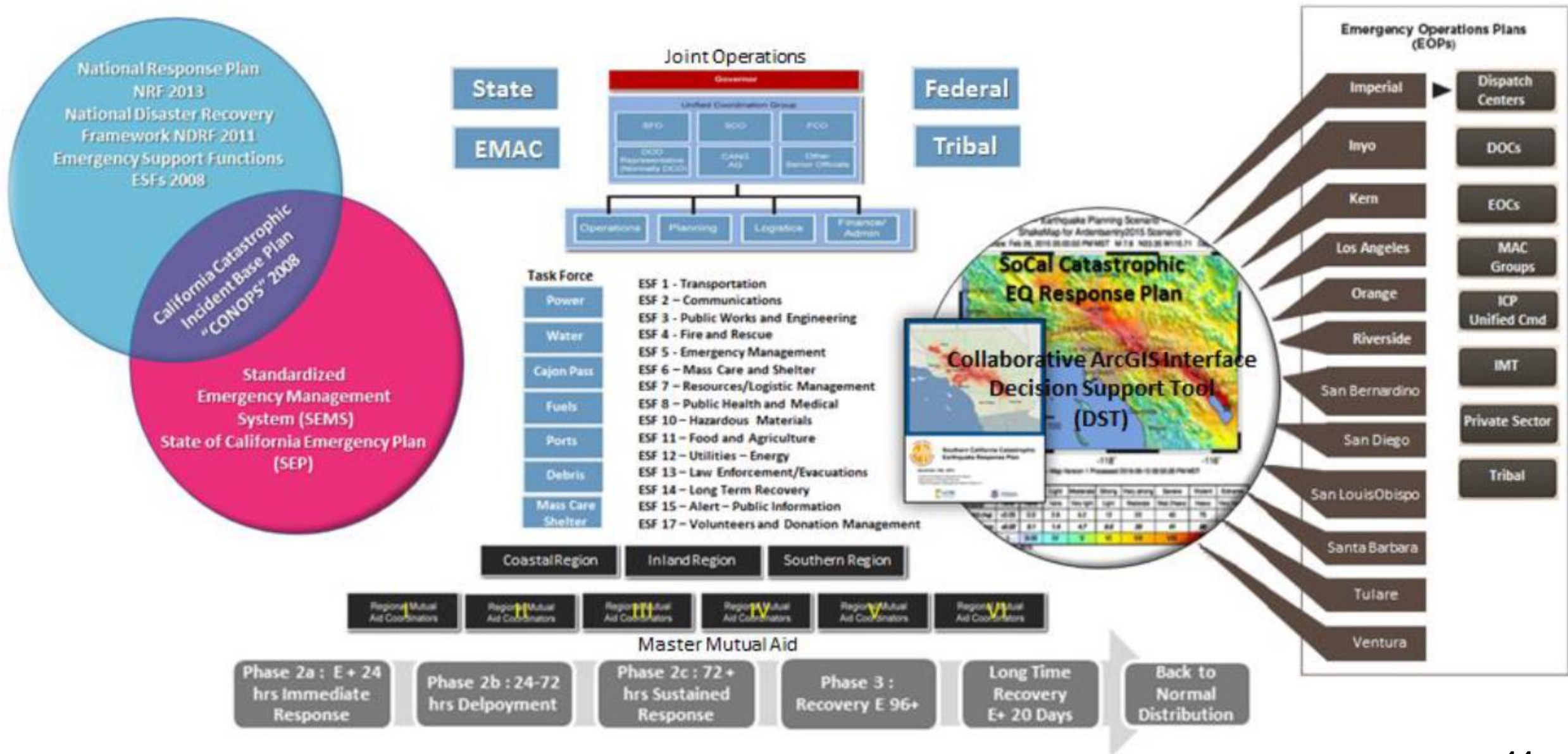
Core Capability

- Public Information and Warning
- Operational Coordination
- Situational Assessment
- Infrastructure Systems Restoration
- Survivor Movement/Evacuation
- Mass Care and Shelter
- Mass Search & Rescue
- On-scene Security & Protection
- Public Health & Medical Services
- Environmental Response/Health & Safety
- Fatality Management
- Logistical Supply Chain/Air Bridge
- Recovery
 - Economic Recovery
 - Health & Social Services
 - Housing
 - Infrastructure Systems Restoration
- Natural & Cultural Resources
- Community Resilience & Building



Incident Strategic Planning Response Key Milestones			Incident Strategic Planning Key Recovery Milestones		
Phase 2a <ul style="list-style-type: none">• Incident Begins(Local, State ,FEMA)• Gov. Declares State of Emergency• SOC activates Level 1 (State)• SOC establish com.' with local OA's• FORM UCG (State, Federal)• Region IX RRCC Level II (FEMA)• State REOC's standup (State ops)• IAP #1 is published (State Plans)• Activate In-State Mutual Aid Resources (Fire, Law, SAR, Medical Health, Survivor Mvt/Evacuation)• MCS TF established (Ops)• Field JIC opens in County (EM)	Phase 2b <ul style="list-style-type: none">• FEMA IMAT - IOF opens at SOC• Registration period begins (IA)• REOC's folded in to SOC - GeoOps• President approves FMAG's FEMA• DIVS/LNO/ESCs deploy to SOC• Daily Statewide legislative briefings• FEMA-State JIC established (EA)• PIO's deployed for field duties (EA)• Major DR declared (FEMA)• Governor request DR for counties• Joint Housing TF initiated• GEO Ops Branch Established (Stage)• LACs Open (State IA)	Phase 2c <ul style="list-style-type: none">• Staging area opens (State LOG)• Sit Rep #01 Published (State Plans)• Joint PDA's begin (State -FEMA)• IA PDA's begin (State IA)• GEO Ops Branch established• FEMA-State agreement signed (State-FEMA)• USACE Private Property Debris Removal Initiated (Federal)• Housing Support Plan Initiated• FEMA registration Period begins• LACs Close (State IA)	Phase 3a <ul style="list-style-type: none">• Schools TF Established (State)• HMGP Public Notice Published• DRC's Open (State-FEMA)• DSA on ground (FEMA)• Household Hazard Waste begins (State/Federal)• Joint Debris TF established (State/Fed)• EHP activated (FEMA)• ROE's deadline for debris removal• SOC closes transition to JFO	Phase 3b <ul style="list-style-type: none">• Hazard Mitigation Funds Lock-In• Shelters Close (State TF)• SBC DLOC opens• First Housing Inspection (FEMA)• Housing Assist. Disbursed (FEMA)• Crisis Counseling ISP established• DSA starts (FEMA)• Applicant Briefings (PA)• Sites cleared for Asbestos (HM)• Site Inspections on-going (PA)• Students return to school or relocated to another school (TF)• Housing Inspections Complete	Phase 3c <ul style="list-style-type: none">• Transition Plan Initiated• Last shelter closes• HM strategy Complete• HHHW mission Complete• JIC re-established at JFO• Continue Recovery Operations

Operational Coordination Complexity



SoCal Catastrophic EQ Plan

Concept of Operation

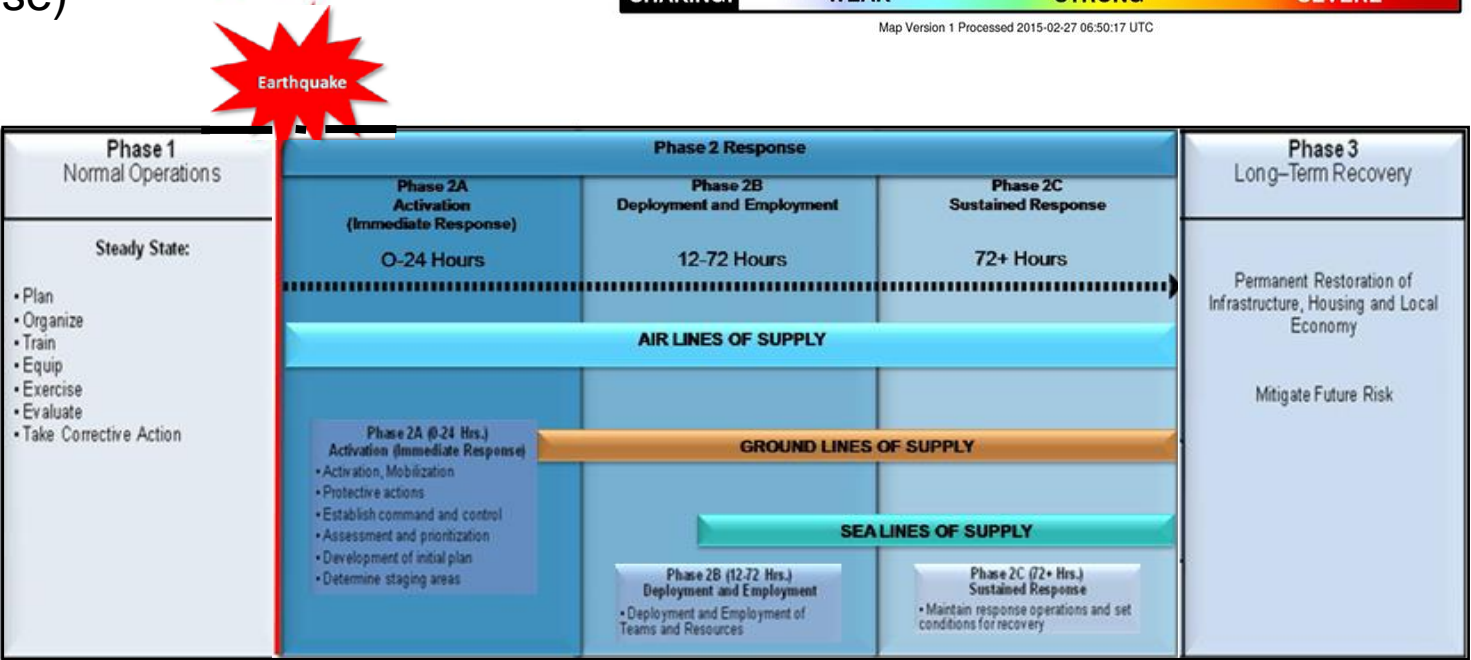
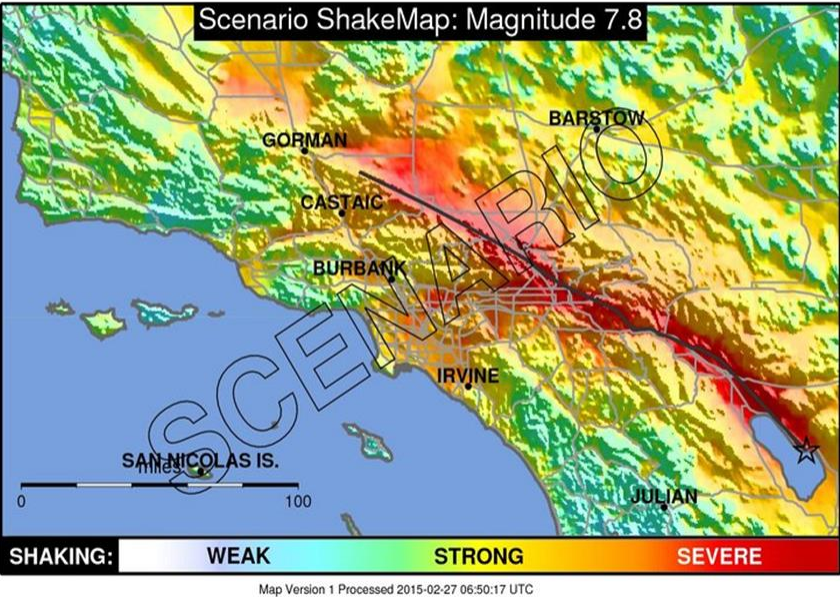
Operational Phases

Phase I: Pre-Incident (Readiness/Preparedness)

- Phase 2:** Response
- a. Activation (Immediate Response)
 - b. Deployment and Employment
 - c. Sustained Response

Phase 3: Recovery

From Event (E+0 hour) through Recovery our focus looks at response, survivor movement/ evacuation, SAR/USAR, mass care and shelter, patient movement, public health and medical through short and long term recovery operations (returning back to normal).



Concept of Operations

End State: Communications, public messaging, mass search and rescue (SAR), firefighting, medical care, evacuation, survivor movement, and mass care and shelter are prioritized and carried out by local responders in each Operational Area (OA). Support concept operations focus on areas of need to areas of capability. Staging Areas (SAs) are determined at the time of the incident. Resources are forward deployed by the state and federal governments in support of multimodal operations. All resource facilities established in close proximity to impacted communities to maximize the logistical support chain. Air Coordination Group (ACG) coordinates all air operations. Operational Support Concept are established for Branches/Divisions, identifying; a) operational support structure, b) functional support structure, and c) geographic operations structure. SOC/IOF is staffed and pushes response and support resources to impacted communities.

Phase 2B: 12 hours to 7 days - Deployment and Employment

End-state: Branches /Divisions are staffed and operational in impacted area assigned, conducting support operations in concert with OAs and local jurisdictions. The transition from the “push” of resources and teams transitions to a more clearly defined “pull” of resources. The State continues to administer EMAC and mutual aid. The JFO becomes fully operational, debris clearance from major access and egress routes has taken place and staging areas are established. Task forces and the private sector are working to restore infrastructure. Mass care services./support are taking place and local jurisdictions are working with state and federal counterparts to clearly define requirements.

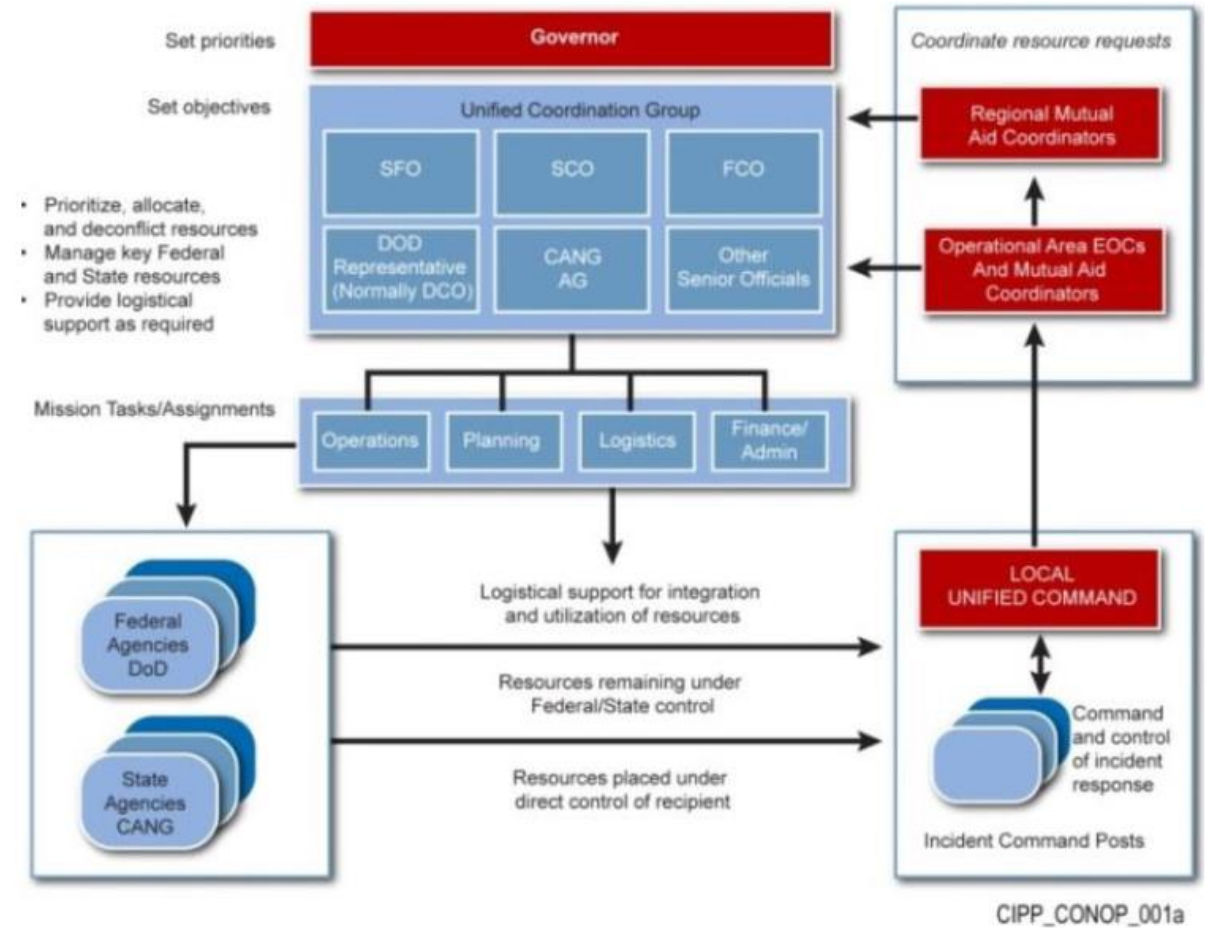
Phase 2C: 7 days + Sustained Response

End State: When response set conditions for near/long-term recovery. Sheltering is transitioned to temporary housing including rebuilt or repaired homes or other temporary housing. Critical lifelines restoration (power, water, wastewater, sanitation/waste, communications, transportation corridors, ports, rail and fuel operations are operating near full commercial capability while maintaining response operations and public messaging.

Phase 3: Long Term Recovery

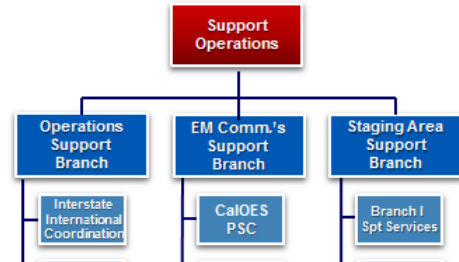
End-state: Private sector, local, state, tribal and federal actions are required to restore services, continue government operations, and promote economic recovery following a catastrophic incident. All life-saving activities have been completed. Phase 3 ends when recovery activities have set the conditions for long-term community recovery. Temporary housing has transitioned to rebuilt homes or other permanent housing, schools are open, tourism is re-established, and critical facilities and infrastructure are self-sustaining through normal transactions.

Joint Operational Support Structure



Initial Operational Support Structure E – E+72

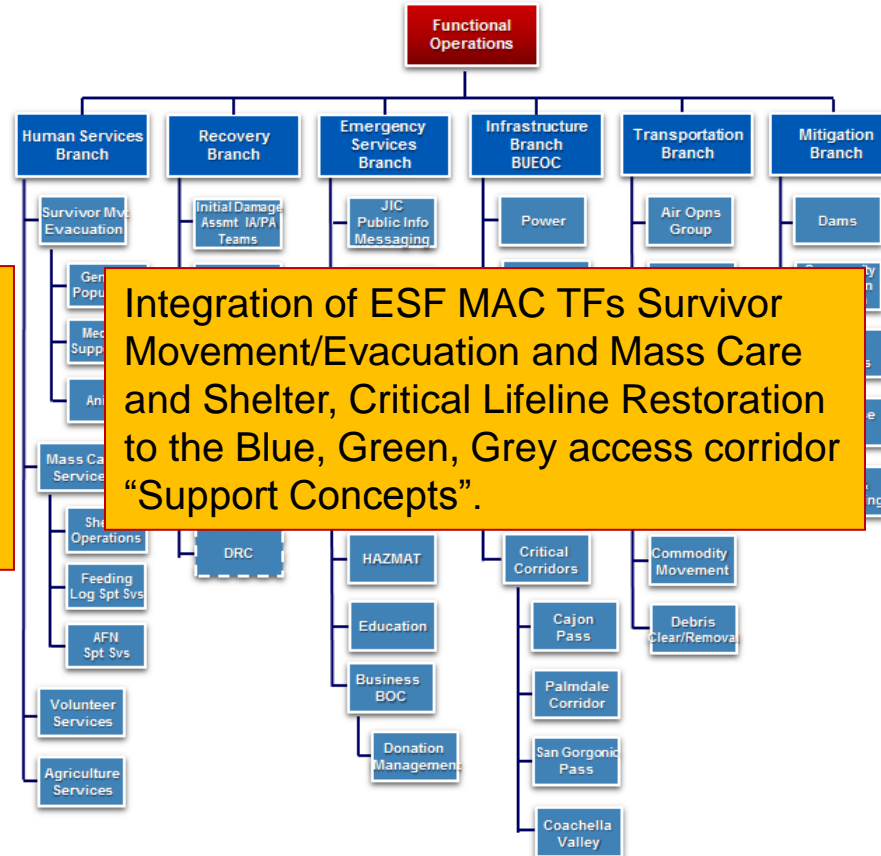
Support



Simplifying to three basic functional elements:

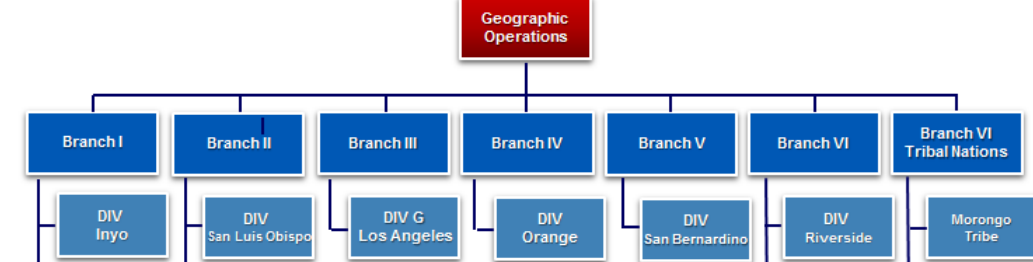
- Mission Coordination
- Communications
- Logistical Support

Functional



Integration of ESF MAC TFs Survivor Movement/Evacuation and Mass Care and Shelter, Critical Lifeline Restoration to the Blue, Green, Grey access corridor "Support Concepts".

Geographic



Providing initial geographic operational structure for the S2 7.8M Earthquake Scenario, keeping County Structure as supporting divisions (geographic/political boundaries) stays the Same...based around community need. Tribal Nations having the option to be integrated within the county or a separate Tribal Nation Branch structure.

Regional Support Coordination



Regional Mutual Aid Coordinators



Operational Coordination – Information Management Flow – Data Collection Process

Evaluate, verify, prioritize, integrate into actionable intelligence that can be utilized and disseminated and displayed.

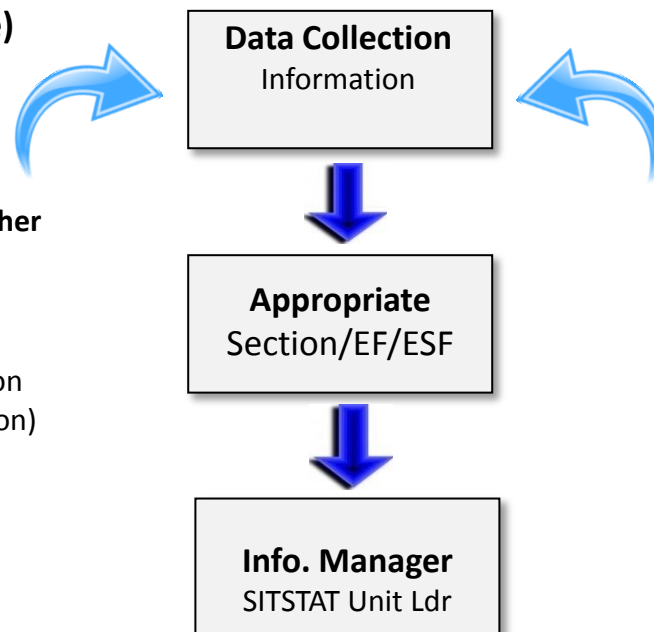
Information Management (Flow and Type)

- ☐ Requests/Actionable
- ☐ Reports/Updates
- ☐ Capabilities/Resources

Face to Face, Email, Phone, CalEOC/WebEOC, Other

Actionable Process

- ☐ Act-on-it
- ☐ Triage/Prioritize by CIR/EEIs (Critical Information Requirements/Essential Elements of Information)
- ☐ Reroute/Forward
- ☐ Verify
- ☐ Report
- ☐ Reply to
- ☐ Distribution
- ☐ Post to Common Operation Picture (COP)



Information Collection Plan

- ☐ Raw Data Documented
- ☐ Analyze the Information for CIRs/EEIs
- ☐ Process the Data into Actionable Information
- ☐ Update Information, Tracking and Maintaining
- ☐ Direction (UCG, C&GS, Plans, Operations, Logistics, Finance and Admin.)
- ☐ Disseminate/Distribution of the Information
- ☐ Journalize/Archiving – Records Management

SOC Essential Elements of Information (EEIs)

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 ESF activations
- Major issues/activities of ESFs, EFs, and other functional areas
- Key state and federal personnel and organizations
- Remote sensing activities/Ariel Analysis
- FCO/SCO priorities
- Recovery program statistics
- Donations and volunteers
- Status of upcoming activities and events
- Status of efforts under State/Federal authorities

Operational Coordination – Information Collection Plan

Implementing a synchronized Information Collection Plan (ICP) is a crucial step California's Multi-Agency Coordination System (MACS) process of collecting, analyzing, validating, prioritizing, allocating and resourcing critical needs throughout the impacted area. The ICP process of collecting Essential Elements of Information (EEIs) must be clearly understood by all participating in response, support, and recovery operations.

ESF 1 Transportation				
Essential Elements of Information	Specific Information Required	Proposed Methodology/Sources	Responsible Elements	Suspense
Status of Transportation Systems, Networks, Corridors and Capabilities	<ul style="list-style-type: none">• Status of major/primary roads• Status of evacuation routes• Status of public transit systems• Road closures• Status of key critical infrastructure corridors and transportation hubs• Status on Airports/Runways/LZs• Status of critical bridges• Status of railways corridors/hubs/bridges/tunnels• Status of ports and waterways• Status of transportation emergency fuels• Accessibility into impacted areas?/Access	<ul style="list-style-type: none">• Impacted Operational Areas• State Liaison/ERT-A/FCO Reports• Caltrans Reports• LEEOC Reports• Emergency Support Function #1/DOT• Assessment Team Reports• Media/Community Relations• USCG Resumption Reports• U.S. Army Corps of Engineers• CUEA-BUEOC/BEOC Reports• California Truckers Association• Private Sector/Railroads	ESF-1 Lead Agency CALTRANS Coordinating CHP CAL OES LE CUEA CEC ACG HARBOR PD	ICS 209 0600 First report: 0900 Updates: NLT 1500 as required or report times publish in IAP "Immediate Attention Required for EEIs"
	<ul style="list-style-type: none">• Anticipated impacts and estimated repair times• Major Issues/Concerns for the next 24-72 hours	<ul style="list-style-type: none">• Air Coordination Group Reports		

All ESF's have identified and incorporated their EEI's and data sets within the Decision Support Tool

ESF1	• Transportation
ESF2	• Communications
ESF3	• Public Works
ESF4/9	• Fire & Rescue
ESF5	• Emergency Management
ESF6	• Mass Care & Shelter
ESF7	• Resources – Logistics Management
ESF8	• Public Health & Medical
ESF10	• Environmental Health & Safety
ESF11	• Food & Agriculture
ESF12	• Utilities/Energy
ESF13	• Public Safety & Protection
ESF14	• Long Term Recovery
ESF15	• Public Information and Warning
ESF17	• Volunteers and Donations Mgt

Situational Assessment (S2 – 7.8M San Andreas Fault Rupture Zone)

Assessing Damage and Planning Access Corridors Strategy Starting Point – Transportation Analysis Caltrans ShakeCast

Planning & Mitigation

Earthquake

Response

Recovery

Decision Support Tool

ShakeCast raises situational awareness by providing the best estimate of ground shaking by using a CISM sensor network within 4 minutes immediately following the event. It also can be used in planning access strategies by integrating existing ShakeMap scenario data to provide bridge damage which is the top priority for DOT inspection.

Earthquake occurs, magnitude and epicenter identified (1 min) using USGS ShakeMap Data

Bridge Assessment Summary

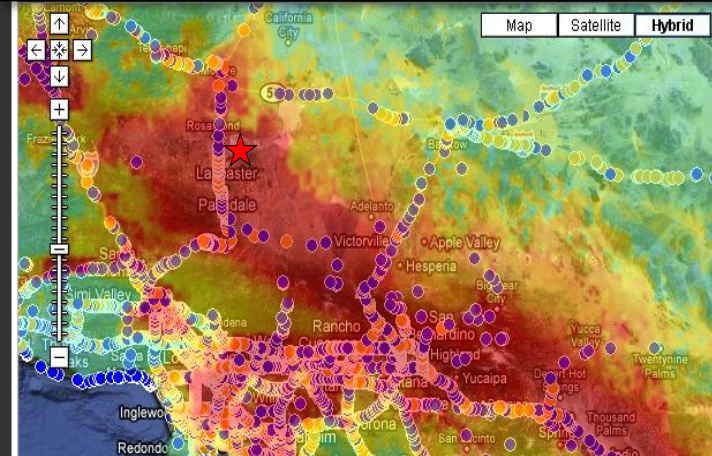
Maximum Peak 1.0 sec Spectral Acceleration: 273.702%

Maximum Acceleration: (not measured)

Total number of bridges assessed: 5012

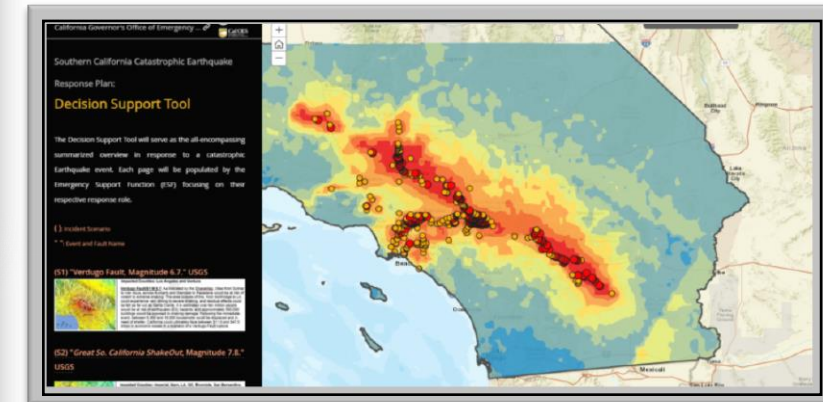
Summary by inspection priority:

High	49	High Priority for full engineering assessment
Medium-High	130	Medium-High Priority for full engineering assessment
Medium	109	Medium Priority for full engineering assessment
Low	4724	Low Priority for full engineering assessment; quick visual inspection likely sufficient.



ShakeCast identifies the bridges that are *more likely* to have damage due to the critical combination of damaging shaking levels and greater vulnerability. (10 min)

Decision Support Tool (DST) is a ArcGIS On-Line Mapping & Analytics Platform that provides contextual tools for mapping and advance planning. Initial concept was based on enhancing the analysis process by creating a deeper critical functional understanding, allowing planners to quickly see where things are happening and how information is connected.



Each functional area share usable data sets based on UCERF 3 - SoCal Risk/Threat EQ Fault Rupture Zones, allowing you to quickly see where things are happening and how information is connected.

Operational Coordination Way Forward

Southern California Catastrophic Earthquake Planning Methodology / Playbook

Response



Recovery



Bridging the Gap

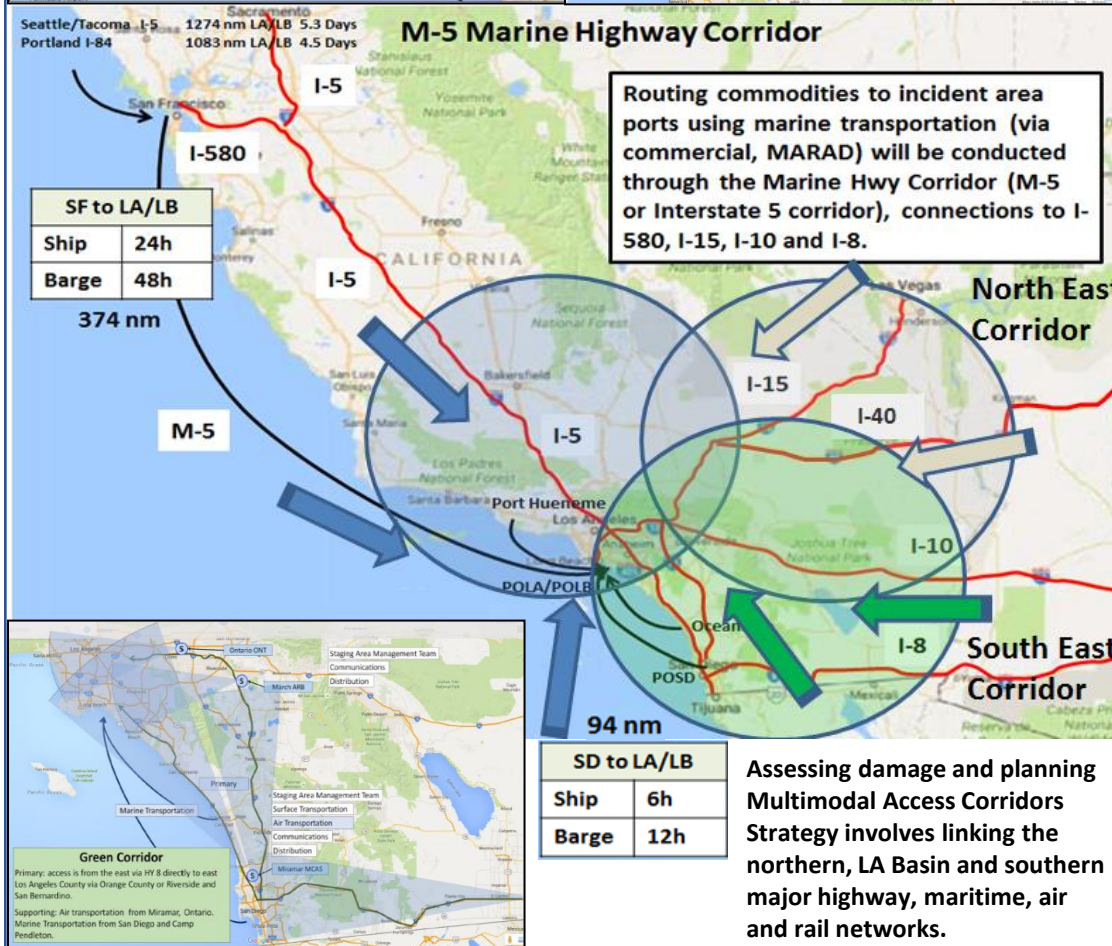


Incident Support
They both start when the event occurs.

Defining the Structure in a Phased Approach

Base Operational Planning –Surface Access Corridor Concept

Geographic Operations Access Corridors (Blue, Grey and Green)



ESF 1 – Operational Phase 2a – b Support Concept

Priorities:

- Clear lifeline and priority routes
- Clear access roads in and out of priority rail, air and sea ports

Objectives:

- Conduct state highway damage assessments
- Conduct bridge damage assessments
- Establish route recovery priorities
- Inspect and stabilize shore equipment and power for vessel loading and unloading

Assumptions Based on Planning:

- Transportation of first responders, commodities and other required resources into the Bay Area will be significantly affected by damage to transportation infrastructure, debris removal operations, inspections, and closures for repairs.
- Surface transportation will be further limited by shortages of fuel, damage to fuel distribution and delivery infrastructure
- Bridges will be closed for up to 72 hours
- Sea port use dependent on waterside access and power for shore equipment to load and unload ships

Assumptions change to facts each operational period

Tier One Capabilities(E + 72):

Branch I - District 9 – Inyo, District 6 – Kern, Tulare
Branch II - District 5 - San Luis Obispo, Santa Barbara
District 7 – Ventura
Branch III - District 7 – Los Angeles, Ventura
Branch IV - District 8 – San Bernardino, Riverside
Branch V - District 12 – Orange
Branch VI - District 11 – San Diego, Imperial
District 8 – Riverside

- Road clearance
- Road closure and detours
- Permanent repairs to infrastructure

Gaps:

- Need a COP for rail, air and sea ports that can communicate with surface transportation.

Constraints / Concerns:




- Local governments whose capabilities will be exceeded will request assistance from Caltrans.
- Availability of fuel and other resources
- Availability of staff

Highway Base Operational Planning Map



Geographic Operations Surface Priority and Secondary Routes/District Support

Primary Data Frame Description / Layers
Twelve counties of southern California

Features of Focus

-  Federal Staging Areas
-  State Staging Areas
-  Potential Bridge Failure


Access Corridors

-  Primary Route
-  Secondary Route

Access Strategy

District 5 - San Luis Obispo, Santa Barbara
District 6 - Kern, Tulare
District 7 - Los Angeles, Ventura
District 8 - San Bernardino, Riverside
District 9 - Inyo
District 11 - San Diego, Imperial
District 12 - Orange


Government Boundaries


 County


 Branch


Shaking Intensity


 MMI V (Moderate)

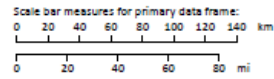
 MMI VI (Strong)

 MMI VII (Very Strong)

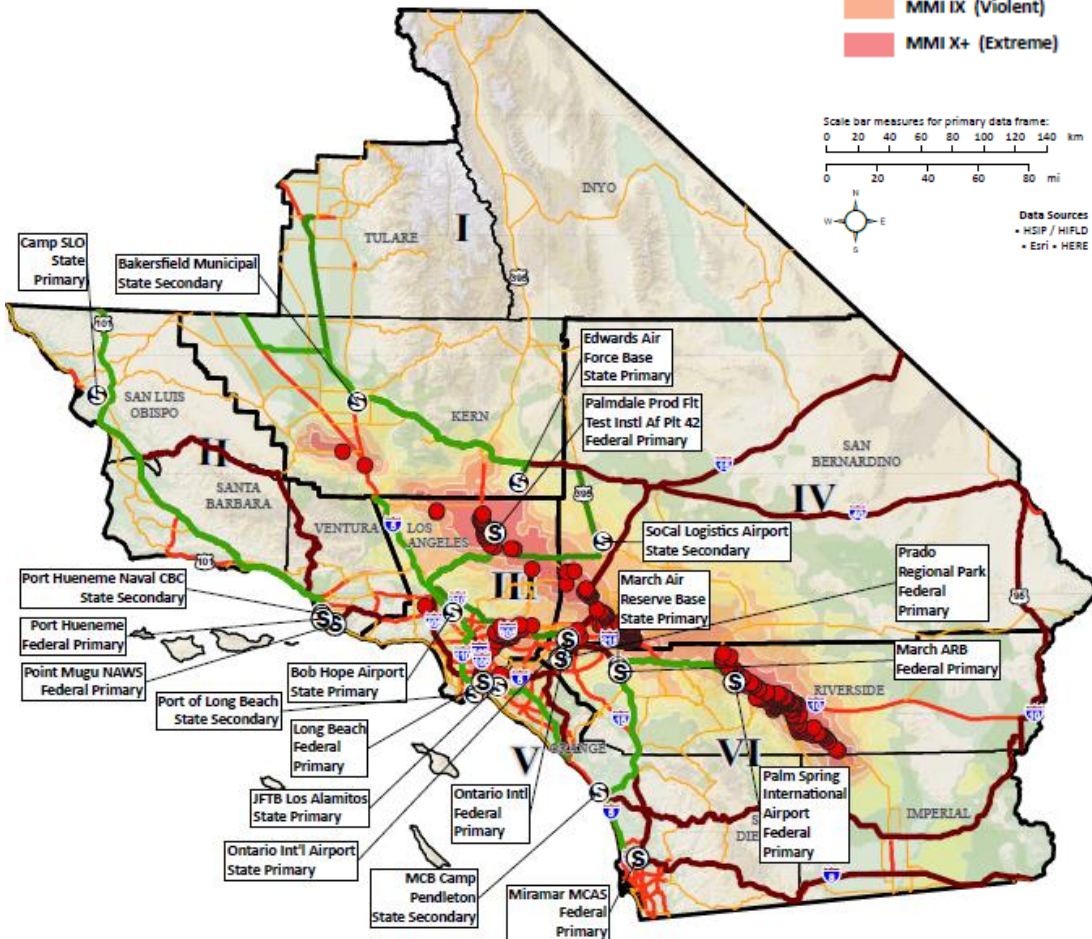
 MMI VIII (Severe)

 MMI IX (Violent)

 MMI X+ (Extreme)



Data Sources
• HSIP / HIFLD
• Esri • HERE



CA-ESF 1 Operational Phase 2a – b Support Concept

Priorities:

- Assess damage to state highway transportation system and assist with coordinating route priorities during recovery efforts
- Provide assessments of state highway transportation infrastructure and traffic conditions. Provide traffic conditions as needed.
- Operate as liaison regarding the status of the state highway transportation system
- Provide state highway transportation policies and guidance as needed.
- Prioritize and determine routes for movement into and out of impacted area according to set priorities.

Tier One Capabilities(E + 72):

Direction, control and coordination of the State Highway Transportation System (ICS/SEMS/NIMS/DOC and EOC)
Assist with establishment of functional state highway corridor(s)
Conduct assessments of State Highway Transportation System
Mitigate hazards on the State Highway Transportation System
Begin operations to clear roadways for ingress and egress

Objectives:

- As the owner operator of the State Highway Transportation System, has Administrative Orders to Repair, Maintain and Operate the state highway system during, and following emergencies and disasters.
- Assists in the management of transportation systems and infrastructure during domestic threats or in response to incidents. Provides recommendations and subject matter expertise to the Governor's Office of Emergency Services (Cal OES) associated with CAESF 1 preparedness, mitigation, response, and recovery.

Gaps:

- No clear tool for developing a Common Operating Picture

Assumptions Based on Planning Factors:

- Contractors can be hired to perform or assist with response and recovery.

Constraints / Concerns:

- Compressed-Natural Gas vehicles may not have fuel to operate.

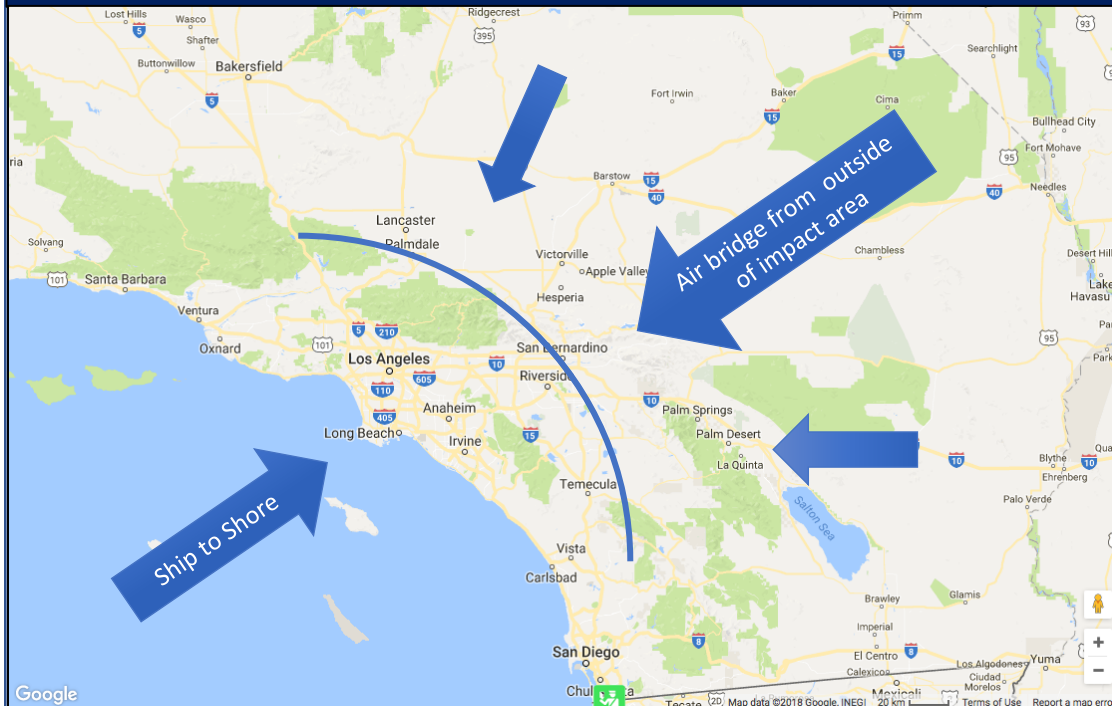
Assumptions change to facts each operational period

Concept of Operations – Transportation (Surface Roads)	Operational Support Structure ESF 1- Surface Roads																
<p>Phase 2A: 0-12 Hours – Activation (Immediate Response)</p>	<div><pre>graph TD A[ESF 1 Liaison SOC / UCG / JFO] --> B[Caltrans DOC] B --> C["District 5
San Luis Obispo,
Santa Barbara"] B --> D["District 6
Kern, Tulare"] B --> E["District 7
Los Angeles,
Ventura"] B --> F["District 8
San Bernardino,
Riverside"] B --> G["District 9
Inyo"] B --> H["District 11
San Diego,
Imperial"] B --> I["District 12
Orange"]</pre></div> <p>Corridor Restoration</p> <div><pre>graph TD A["INFRASTRUCTURE
RESTORATION TF LEAD
State
Federal"] --> B["COMMUNICATIONS
GROUP"] A --> C["POWER/ELECTRIC
GROUP"] A --> D["FUELS/DISTRO
& STORAGE GRP"] A --> E["ROAD/BRIDGE &
RAIL GROUP"] A --> F["DEBRIS REMOVAL
GROUP"] B --> B1["AT&T
VERIZON
FRONTIER
SWITCH
COX"] C --> C1["CAISO
SCE
SOCAL GAS
SEMPRA
LADWP
MWD"] D --> D1["KINDER
MORGAN
CAL GAS
SEMPRA
ALPINE NG
SO. WEST GAS
CEC"] E --> E1["CALTRANS
CHP
SHERIFF
BNSF
UP
County"] F --> F1["CALTRANS/DOT
CDGS
CALEPA
CCC
CNG/DOD
USACE"]</pre></div> <table><tr><th colspan="4">Multi-Agency Coordination Group / Stakeholders</th></tr><tr><th>Local</th><th>State</th><th>Federal</th><th>NGO</th></tr><tr><td><ul style="list-style-type: none">County EOC’sLaw enforcementPublic works</td><td><ul style="list-style-type: none">Cal OESESF1,3,7,10,13,15CHPCNG</td><td><ul style="list-style-type: none">FEMA Region IXESF1,3,7,10,13,15USACEUSDOTFHWADoD</td><td>UP/BNSF Ports of LA/LB</td></tr><tr><td></td><td></td><td></td><td>PRIVATE<ul style="list-style-type: none">ContractorsUtilities/Energy</td></tr></table>	Multi-Agency Coordination Group / Stakeholders				Local	State	Federal	NGO	<ul style="list-style-type: none">County EOC’sLaw enforcementPublic works	<ul style="list-style-type: none">Cal OESESF1,3,7,10,13,15CHPCNG	<ul style="list-style-type: none">FEMA Region IXESF1,3,7,10,13,15USACEUSDOTFHWADoD	UP/BNSF Ports of LA/LB				PRIVATE <ul style="list-style-type: none">ContractorsUtilities/Energy
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				PRIVATE <ul style="list-style-type: none">ContractorsUtilities/Energy													
<p>End-state: Assess damage to state highway transportation system and infrastructure, protect the public, assist with route prioritization during response efforts, and support traffic condition reporting. Begin road clearance ingress and egress operations.</p>																	
<p>Phase 2B: 12 hours to 7 days - Deployment and Employment</p>																	
<p>End-state: Begin mitigation and restoration of state transportation infrastructure.</p>																	
<p>Phase 2C: 7 days + Sustained Response</p>																	
<p>End-state: Continue restoration of state transportation system while mitigating short-term hazards.</p>																	
<p>Phase 3: Long Term Recovery</p>																	
<p>End-state: Restore or replace damaged state transportation system facilities as soon as practicable.</p>																	

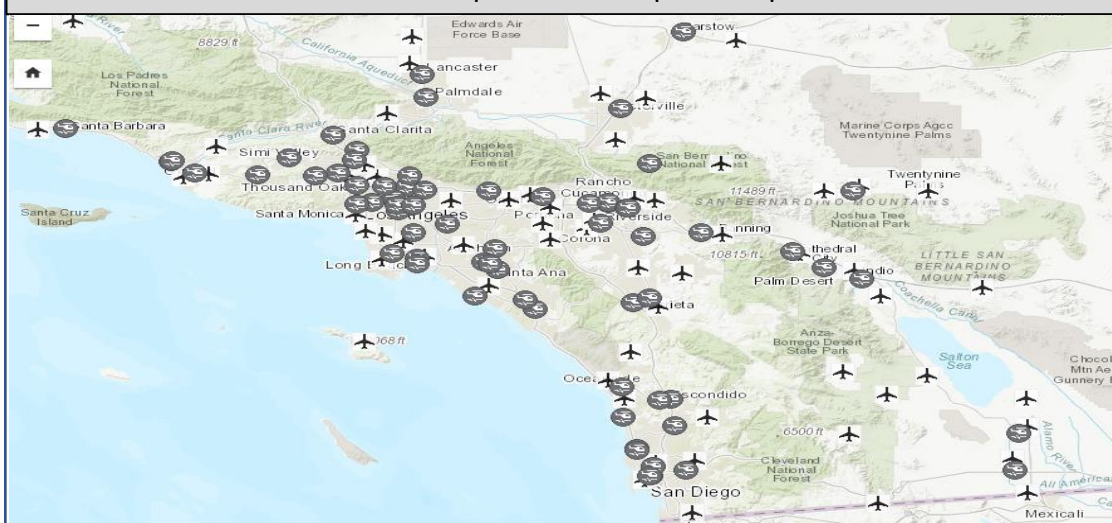
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Aviation Base Operational Planning Map (Air Bridge)

Geographic Operations Surface Priority and Secondary Routes/District Support



Public Use Airports and Hospital Heliports



CA-ESF 1 Operational Phase 2a – b Support Concept

Priorities:

- Establish air coordination with UCG
- Inspect airports and hospital heliports for capabilities
- Prioritize airport and heliport uses based on IAP priorities and objectives
- Establish inventory of available aviation programs

Objectives:

- Establish airspace management plan with FAA
- Validate medical transport plans with ESF 8
- Establish ship to shore capabilities with DCE/DOD

Assumptions Based on Planning Factors:

- Airports outside of impact area will be heavily used until interior airports are inspected
- Local government has planned uses for their airports that need to be synced with broader objectives.
- RIX DCE coordinates ship to shore movement of DOD air assets with ACG
- OES/Caltrans SAP team can assist with airport infrastructure inspections if tasked
- CERT, A-CERT and, pilot groups to assist airport management with multi-use airport support.
- Commercial service airports to be used for heavy aircraft, GA airports for all other flights
- Hobby UAS/drones will compromise airspace and air response

Assumptions change to facts each operational period

Tier One Capabilities(E + 72):

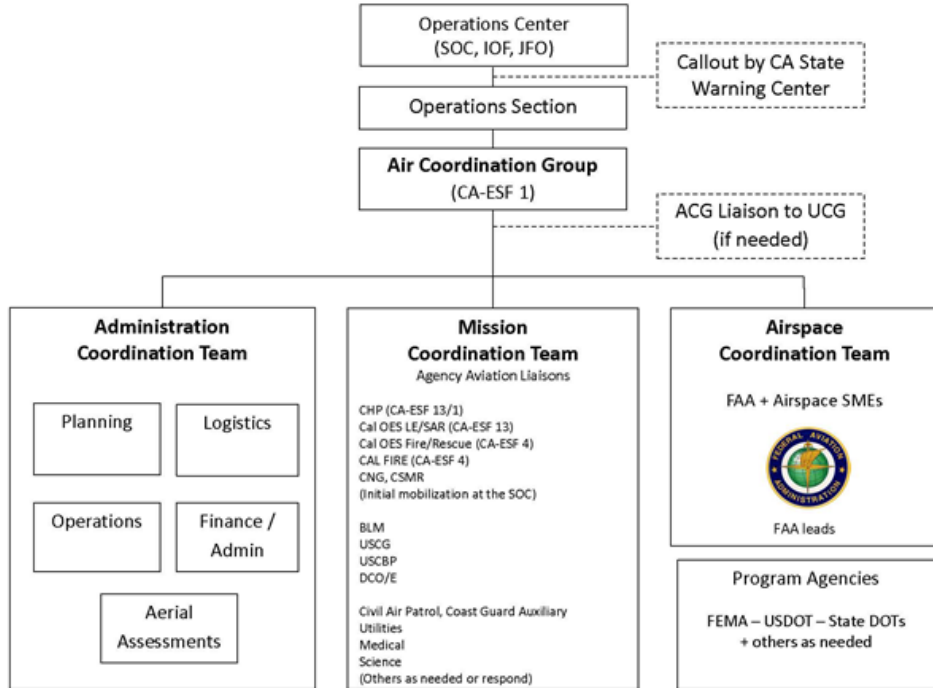
- Inspection of airports and hospital heliports
- Activation of full ACG
- FAA deploys emergency response team to ACG

Gaps:

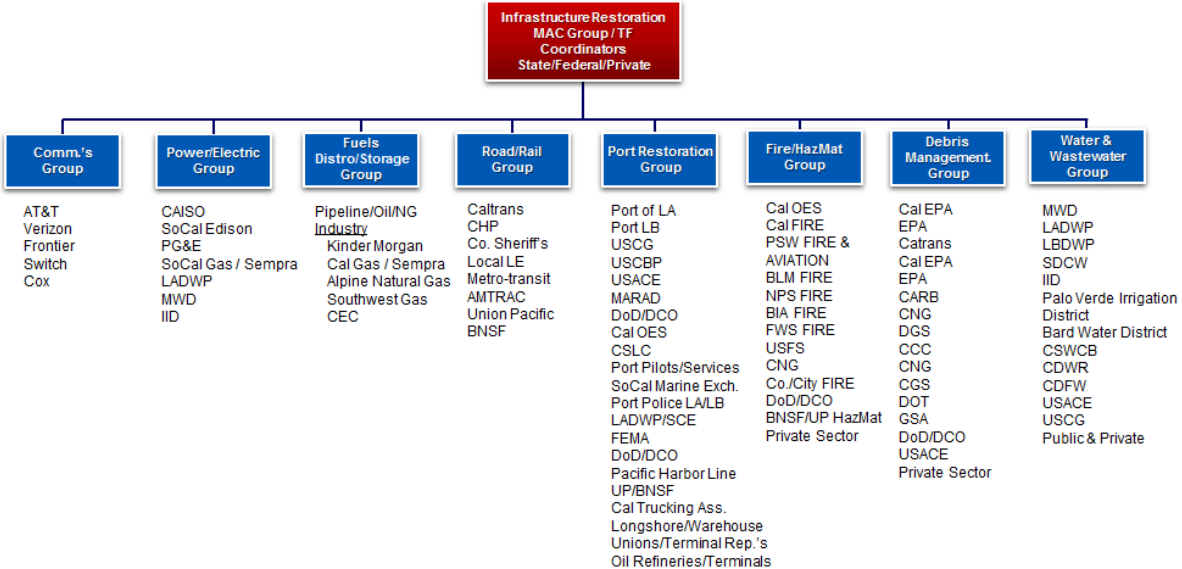
- Have not rehearsed (TTX) the establishment of a full ACG ops center

Constraints / Concerns:

- Will take FEMA logistics 5+ days to bring out and set up a full ACG ops center.
- Airports will be used for much more than aviation. Will need to coordinate site planning to maintain safe aircraft/airspace minimums alongside other uses.
- Lack of a formal aviation COP
- No formal interagency UAS/drone methodology. ACG and FAA will coordinate operations

Concept of Operations – Transportation (Air)	Operational Support Structure ESF 1- Air																				
<p>Phase 2A: 0-12 Hours – Activation (Immediate Response)</p>	 <p>Organization for a 40-125 person ACG under full activation</p>																				
<p>End-state: Activation of ACG, capability assessment of impacted area airports and hospital heliports against FAA’s 5010 Airport Master Record, assessment of responding aviation programs, coordinated mission tasking/assignments and airspace control plans.</p>																					
<p>Phase 2B: 12 hours to 7 days - Deployment and Employment</p>																					
<p>End-state: Coordinated tasking of aviation partners, coordinated airspace management, and efficient use of airports and hospital heliports based on capabilities.</p>																					
<p>Phase 2C: 7 days + Sustained Response</p>	<table><tr><th colspan="4">Multi-Agency Coordination Group / Stakeholders</th></tr><tr><th>Local</th><th>State</th><th>Federal</th><th>NGO</th></tr><tr><td><ul style="list-style-type: none">• County EOC’s• Local Airports/Fields• Local Landing Zones• Local fire & law• Hospital heliports</td><td><ul style="list-style-type: none">• Cal OES ACG• Cal OES (Fire/Rescue & Law branch)• CAL FIRE Air Ops• CHP Air Ops• CA Military Dept• Caltrans OEMIP</td><td><ul style="list-style-type: none">• FEMA Region IX• FAA• USDOT• DOD• USCG• USCBP• USFS• BLM• NASA• USGS</td><td><ul style="list-style-type: none">• Utility companies</td></tr><tr><td></td><td></td><td></td><td>PRIVATE</td></tr><tr><td></td><td></td><td></td><td>Air ambulance Cal Pilots Civil Air Patrol CG Aux – Air Assn of CA airports</td></tr></table>	Multi-Agency Coordination Group / Stakeholders				Local	State	Federal	NGO	<ul style="list-style-type: none">• County EOC’s• Local Airports/Fields• Local Landing Zones• Local fire & law• Hospital heliports	<ul style="list-style-type: none">• Cal OES ACG• Cal OES (Fire/Rescue & Law branch)• CAL FIRE Air Ops• CHP Air Ops• CA Military Dept• Caltrans OEMIP	<ul style="list-style-type: none">• FEMA Region IX• FAA• USDOT• DOD• USCG• USCBP• USFS• BLM• NASA• USGS	<ul style="list-style-type: none">• Utility companies				PRIVATE				Air ambulance Cal Pilots Civil Air Patrol CG Aux – Air Assn of CA airports
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			PRIVATE																		
			Air ambulance Cal Pilots Civil Air Patrol CG Aux – Air Assn of CA airports																		
<p>Phase 3: Long Term Recovery</p>																					
<p>End-state: Restoration of public use airports and heliports to FAA standards.</p>																					

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ESF12 Utilities / Energy Concept of Operations		Operational Support Structure Critical Lifeline Restoration			
Phase 2A: 0-12 Hours – Activation (Immediate Response)		 <pre> graph TD Root["Infrastructure Restoration MAC Group / TF Coordinators State/Federal/Private"] Root --- C["Comm's Group"] Root --- PE["Power/Electric Group"] Root --- FDS["Fuels Distro/Storage Group"] Root --- RR["Road/Rail Group"] Root --- PR["Port Restoration Group"] Root --- FH["Fire/HazMat Group"] Root --- DM["Debris Management Group"] Root --- WW["Water & Wastewater Group"] C --- CList["AT&T Verizon Frontier Switch Cox"] PE --- PEList["CAISO SoCal Edison PG&E SoCal Gas / Sempra LADWP MWD IID"] FDS --- FDSL["Pipeline/Oil/NG Industry Kinder Morgan Cal Gas / Sempra Alpine Natural Gas Southwest Gas CEC"] RR --- RRL["Caltrans CHP Co. Sheriff's Local LE Metro-transit AMTRAC Union Pacific BNSF"] PR --- PRL["Port of LA Port LB USCG USCBP USACE MARAD DoD/DCO Cal OES CSLC Port Pilots/Services SoCal Marine Exch. Port Police LA/LB LADWP/SCE FEMA DoD/DCO Pacific Harbor Line UP/BNSF Cal Trucking Ass. Longshore/Warehouse Unions/Terminal Rep.'s Oil Refineries/Terminals"] FH --- FHL["Cal OES Cal FIRE PSW FIRE & AVIATION BLM FIRE NPS FIRE BIA FIRE FWS FIRE USFS CNG Co./City FIRE DoD/DCO BNSF/UP HazMat Private Sector"] DM --- DML["Cal EPA EPA Caltrans Cal EPA EPA CARB CNG DGS CCC CNG CGS DOT GSA DoD/DCO USACE Private Sector"] WW --- WWL["MWD LADWP LBDWP SDCW IID Palo Verde Irrigation District Bard Water District CSWCB CDWR CDFW USACE USCG Public & Private"] </pre>			
Phase 2B: 12 hours to 7 days - Deployment and Employment					
End-state: Utility company response and repair teams continue to assess and repair critical utilities, including gas, power grid, communications networks, water/wastewater systems and report status to local, state and federal government.					
Phase 2C: 7 days + Sustained Response					
End-state: Utility company repair teams continue to assess, prioritize and repair critical utilities. Including power grid, communications, gas, water/wastewater systems and report status to local, state and federal bodies.					
Phase 3: Long Term Recovery					
End-state: CUEA will continue to work with all critical utilities as they transition to their respective corporate recovery plans, continue to communicate requirements.					
		Multi-Agency Coordination Group / Stakeholders			
		Local	State	Federal	NGO
		<ul style="list-style-type: none"> County OES's Local ARC County Health Departments Social Services Veterinary Svs Local Transit Local Public Works Co. School Districts Local VOADs Local Tribal Nations 	<ul style="list-style-type: none"> Cal OES CDSS (CA-ESF 6) CDHS/CDPH/EMSA (CA-ESF 8) CDFA (CA-ESF 11) National Guard DGS (CA-ESF 7) Dept. Education Regional VOADs Gov's Tribal Nations Coord. Cal Trans Cal Fire 	<ul style="list-style-type: none"> FEMA Region IX FEMA (ESF 6) FEMA (ESF 7) USACE (ESF 3) HHS (ESF 8) USDA (ESF 11) FEMA (ESF 2) 	<ul style="list-style-type: none"> Regional/National ARC Salvation Army Faith Based
					PRIVATE <ul style="list-style-type: none"> Hotel Associations Donations
		- 27 -			

Upcoming Events Schedule:

27 Jun – GeoOps (Operational Coordination/Branch/Div. TF's) Ben Clark Public Safety Center, Riverside
28 Jun – CUEA Annual Conference SCE Conference Center – Irwindale
25 Jul – Tribal Workshop (Operational Support Annex) Pala, Fire Training Room/Facilities
26 Jul – SoCal MARAC Meeting – Buena Park Community Center Ballroom
01 Aug - CalOES/FEMA Executive Brief (Cal OES HQs) Conflict with FEMA RIX RISC Meeting
15 Aug – SLSC Information Analysis Briefing Mount San Antonio College, Walnut
30 Aug - LA/LB Fleet Week
12 Sep – GeoOps (Surv. Mvt/MCS Strategy) COA Workshop Ventura Co. Board of Sup. Rm 800
10 Oct – GeoOps COA (Logistics, Ground/Rail/Maritime/Air Bridge – Access Strategy) Workshop Norman P. Murray Com.Ctr, Mission Viejo
11 Oct - San Diego Fleet Week (coordinating Senior Executive MAC Group TTX Breakout add-on)
25 Oct – SoCal MARAC Meeting – TBD
28 Nov - GeoOps (Recovery Strategy) COA Workshop TBD
16 Jan – SLSC Course of Action (COA Briefing Overview - TBD)
27 Mar 2019 – SLSC Discussion Based TTX (TBD)
May – SLSC Meeting – Publish SoCal Catastrophic EQ Plan (TBD)
Jun 2019 – 2024 SCCEP Socialization

Training Gaps / Consequences - Readiness

- High Density Shelter Manager/Credentialing (for Catastrophic Response)
 - Homeless Population/Integration and programs
- Type III – Logistics Large Scale Staging Area Manager/Credentialing (for Catastrophic Response)
- Linkage/Synchronization between Evacuation, Survivor Movement, Mass Care and Shelter unity of effort.
- EOC Response to Recovery Transition Training
- EOC Catastrophic Training (looking at joint Geographic Operations Integration - Priorities, Objectives, and Scarce Resource Allocation)
- Port of LA/LB Executive MAC Group Decision Making Process
- Implementing State Contracts by Trained OA Procurement Officers/Logistics Leads (DGS Tasking)
- Logistics – Public and Private Sector Integration at all Levels (Workshops – OA)

Collaborative Planning Effort

2018 CUEA Annual Conference

Informational Update
Briefing

Questions



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