

# 2014



## State of California Threat and Hazard Identification and Risk Assessment (THIRA)



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**State of California  
Threat and Hazard Identification and Risk Assessment (THIRA)**

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**Threat and Hazard Identification and Risk Assessment**

**Summary**

The Threat and Hazard Identification and Risk Assessment (THIRA) methodology provides a framework for emergency management organizations to define threats and hazards of concern to the community they represent and assess the capabilities desired by the organizations to deal with the consequences of the defined threats and hazards. This information leads to the establishment of capability targets across all of the thirty-one core capabilities defined in the National Preparedness Goal<sup>1</sup>. Public and private stakeholders from across California, FY 2012/2013 THIRAs, and existing state mitigation/emergency plans all contributed to the information underlying the State of California FY 2014 THIRA.

This document presents the State of California’s final capability targets for FY 2014 and includes a broad estimation of resources required to support implementation of capability targets in thirteen of the thirty-one core capabilities. The FY 2014 capability targets act as the foundation for the FY 2014 State Preparedness Report.

**FY 2014 THIRA Process<sup>2</sup>**

The FY 2014 THIRA Process consists of four basic steps:



<sup>1</sup> National Preparedness Goal completed on September 1, 2011: <http://www.fema.gov/national-preparedness-goal>

<sup>2</sup> See Comprehensive Preparedness Guide (CPG) 201, 2<sup>nd</sup> Edition published by the Federal Emergency Management Agency (FEMA) in August, 2013 for complete details of the process.

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### FY 2014 THIRA Process

1. **Identify the Threats and Hazards of Concern.** Based on a combination of experience, forecasting, subject matter expertise, and other available resources, identify a list of the threats and hazards of primary concern to the community.
  
2. **Give the Threats and Hazards Context.** Describe the threats and hazards of concern, showing how they may affect the community.
  
3. **Establish Capability Targets.** Assess each threat and hazard in context to develop a specific capability target for each core capability identified in the National Preparedness Goal. The capability target defines success for the capability.
  
4. **Apply the Results.** Estimate the resources required for each core capability to achieve the capability targets through the use of community assets and mutual aid, while also considering preparedness activities, including mitigation opportunities.

### The 2014 THIRA updates identified threats and hazards and adjusts capability targets.

- The 2014 THIRA seeks to strike a balance between updated capability targets and the need to provide enough continuity to support an efficient, meaningful evaluation of the capability targets in the State Preparedness Report (SPR).
  
- The 2014 THIRA relies on the understanding that it is not necessary or desirable to completely re-write the THIRA annually and to consider changes in both the THIRA and SPR as incremental and balanced in accordance with a three to five year strategic planning cycle.
  
- The 2014 THIRA hopes to limit potential bias caused by changes in its parameters, build consensus, and allow the THIRA to influence other strategic planning cycles.

The completed capability targets are the required initial input to the 2014 California State Preparedness Report. Both SPR and THIRA are due on 31 December, 2014 to FEMA as part of both the Federal Fiscal Year 2014 Homeland Security Grant Program and the Federal Fiscal Year 2014 Emergency Management Preparedness Grant. However, the need to complete updates to the THIRA capability targets as a necessary foundation for the SPR process mandates a completion of these updates prior to October 1, 2014. Any delay beyond this date would significantly impact the ability to produce an accurate SPR.

The bulk of FY 2014 work centers on two areas: 1) The examination of additional Threats and Hazards and, 2) reviewing numbers used in the 2012/2013 THIRAs.

Additional threats and hazards such as tsunamis, volcanic eruption, cyber-attacks, influenza pandemic, animal disease, and attacks to mass gathering locations were identified for potential

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inclusion in California's 2013 THIRA process, and the analysis of these events took place as part of FY 2014 update.

The capability targets have been sent out via an online survey, comments incorporated into the targets, and republished for review through an additional survey. The majority of changes focus on refining the language of the target capabilities rather than wholesale change of the targets.

### **Conclusions Based on Participant Feedback**

The THIRA works well as a high-level, strategic document useful in setting goals in conjunction with other strategic planning documents and investment justifications.

The THIRA as implemented in California at the state level is the first step in a more extensive process. The THIRA remains a foundational strategic document complementing the State Hazard Mitigation Plan. Additional steps include prioritizing core capabilities for development through various mechanisms such as the State Preparedness Report, training and exercise programs, operational/emergency planning, hazard mitigation efforts (pre- and post-disaster), and individual/community preparedness programs.

Due to the large scope of the final capability targets and their associated resource requirements, it is difficult to summarize all 31 capability targets, and as a result the complete set of targets and resources are in annex one of this document.

The 2014 THIRA saw good progress in a comprehensive review and update to threats and hazards. Tsunami, climate-related issues, volcanic eruption, cyber-attacks, influenza pandemic, animal disease, and attacks to mass gathering locations were added as threats/hazards and examined in 2014.

### **Revisions to the Capability Targets**

Several bullets were added to reflect information gathered due to the inclusion of pandemic and animal disease in the list of identified threats and hazards reviewed for 2014. In addition, the number of people affected was adjusted in several of the targets such as Public Information & Warning, Critical Transportation, Mass Search & Rescue, and Mass Care.

Numbers increased in all cases except Mass Search & Rescue. The increase in numbers generally reflected the inclusion of impacts that extended beyond the initial response period in the response mission area.

Mass Search and Rescue saw a drop due to a re-focusing on HAZUS figures directly related to persons rescued which excluded data related to damaged, but still standing structures. This change was largely administrative and definitional in nature without change to the underlying

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impacts or resources needed to deal with a large-scale rescue effort in the wake of major catastrophic event such as a magnitude 7.8+ earthquake.

The resource requirement section continues to be a preliminary work completed by a coalition of those able to participate under a tight set of deadlines rather than a comprehensive review of the issue. Little headway was gained in moving to more concrete, reliable estimates with most comments still centered on the resource requirement parameters or the refinement of nomenclature/characteristics of typed resources.

Last year's summary of participant feedback concerning resource requirements remains current:

- Define the capability of typed resources in terms of the work the resource could perform.
- Until capabilities of resources are standardized each organization producing a set of resource requirements faces the prospect of establishing these standards.
- Time and manpower necessary for establishing those standards and developing a set of requirements based on any established standards with a degree of accuracy demands a longer timeline than provided in the annual THIRA process.
- Integrate the development of detailed resource requirements into a longer-term mitigation or response planning process.

### **Steps Forward**

Cal OES will continue to work with our federal partners to pursue recommendations that further improve the THIRA process. Several specific observations suggest the steps necessary to significantly improve Threat and Hazard Identification and Risk Assessments and their associated capability estimates and preparedness reports:

- The process of identifying threats and hazards and determining impacts within the State of California is mature. Therefore, currently and going forward, while additional threats and hazard information can be added to the THIRA, no major changes should be necessary.
- The state THIRA process has always integrated information received from FEMA Region IX, UASI, Tribal and any other THIRAs completed within the state into the state-level THIRA. However, only previous year THIRA information from these organizations has been available for review and integration into the current year state THIRA as the annual due date for these THIRAs is either the same or after the due date for the state THIRA. The state's THIRA efforts must also be complete earlier than the nominal due date in order to allow for the development of the State Preparedness Report. In order to more effectively collaborate on the current year THIRA, the date that a state THIRA is due should be at least three months after the due date for UASI/Tribal THIRAs. The State Preparedness Report

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could also evaluate the previous year's THIRA capability targets in order to maximize the time available to complete both reports.

- Estimating Resource Requirements at the end of the THIRA process without a mature typology has significantly hindered the development of a common understanding of the nature and process of defining operational resource requirements. California should develop a consensus over the actual capability of NIMS typed assets in order to better inform Resource Requirement to fulfill Capability Targets identified in the THIRA.
- The THIRA is a strategic plan which needs time to analyze and implement the results. One concept is to use a three to five year cycle to apply, review and then change the THIRA rather than the current one year cycle. This would synchronize the THIRA with existing mitigation/emergency planning cycles, and allow for better analysis of the THIRA and application to other documents such as the SHMP, CAT plans, OP Plans and Training and Exercise plans.

**THIRA Submission to FEMA**

The final THIRA product for FY 2014 was due to the Federal Emergency Management Agency on December 31, 2014. FEMA has required completion of both the THIRA and the SPR for California to meet Homeland Security Grant Program (HSGP) and Emergency Management Performance Grant (EMPG) eligibility requirements in FY 2014. However, FEMA's current guidance makes it clear that actual FY 2014 grant awards will be made prior to the submission of the THIRA. Late submission may delay grant funding until the THIRA is submitted, but otherwise the THIRA does not affect the grant process.

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**Annex One**

**FY 2014 State of California  
Capability Targets**

**Planning**

- Review, update, and adopt local and state plans in accordance with timelines established for each plan.
- Coordinate and ensure alignment during development and publishing of state and local catastrophic plans, mitigation plans, and operational plans inclusive of all 58 counties, tribes, public and private partners, volunteer organizations, and neighboring states.
- Conduct after action reviews, workshops, seminars, drills and exercises, including statewide biennial exercises of catastrophic incident operation plan(s) to validate and refine local, county and state emergency management plans that address prevention, mitigation, protection, response, and recovery for identified threats and hazards.

**Public Information and Warning**

- Educate California's population on threats and hazards in their community throughout all 58 counties and all tribal areas.
- Maintain and improve information and warning systems such as reverse 911, earthquake/tsunami early warning, IPAWS (Integrated Public Alert and Warning System), other cell phone alert applications, and MyPlan/MyHazard.
- Provide warning of the expected impacts during an unfolding event such as a flood for one million people, including messaging on how to take appropriate actions.
- Coordinate local, state and federal public information strategy within 12 hours after an incident to communicate information such as location and activation schedule of shelters and Family Assistance Centers as well as information related to missing persons and fatalities in a cultural and linguistic manner.

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- Establish communications within 24 hours after an incident to update the populace at regular intervals in all of California's 58 counties, tribal areas, surrounding states, and federal partners on response efforts and other information (e.g. details of public/individual assistance programs) relevant to the incident.
- Employ multiple information dissemination platforms to include private media outlets, public address systems, and social media to distribute guidelines for additional assistance available to the public after the close of the immediate operational response.

### **Operational Coordination**

- Establish and maintain an emergency management operational structure capable of coordinating the restoration of services and facilities during the first 72 hours after an incident to enable communications, water and wastewater services, power generation, fuel resupply, and air operations as prioritized by the UCG (Unified Command Group) through the implementation of a joint Incident Action Plan (IAP) that is adjusted as temporary sources of water, power, and fuel are acquired and consumed by local jurisdictions in the incident area.
- Activate and maintain Emergency Operation Centers (EOCs) at the state, regional, operational area, and municipality level in accordance with state and local response plans.
- Coordinate all requests for international, state, federal and private sector resources and support through the state for the duration of the incident.

### **Forensics and Attribution**

- Coordinate evidence collection and investigative support requested by the lead agency within the first 72 hours of the discovery of materials suspected of being used in the preparation or actual execution of a terrorist attack or involved in an intentional/accidental hazard.

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- Support collection of all evidence at the site of the event, transportation of material to designated collection point, and analysis of collected material in accordance to procedures and timelines established by the lead agency for the incident to prevent initial or follow-on acts and/or swiftly develop counter-options.

**Intelligence and Information Sharing**

- Disseminate initial information reports via the State Threat Assessment System (STAS) on ongoing terrorism events to 100% of designated federal, state, local, and private sector partners, to include Terrorism Liaison Officers (TLOs), analysts employed outside the STAS by state, local organizations, or task forces at various levels of government in accordance with timelines set by operational guidelines or plans.
- Coordinate the dissemination of information bulletins and intelligence reports produced by federal, state, local, and private sector partners to 100% of recipients designated for access to sensitive information regarding threats and hazards.
- Collect, process, and disseminate information for use at the Emergency Operations Centers (EOCs) in accordance with established protocols to assist in maintaining situational awareness, processing requests for mutual aid, and assessing impacts of the event.

**Interdiction and Disruption**

- Intercept 100% of persons and/or materials, or transport identified as associated with a potential terrorist act.
- Assist in the simultaneous apprehension of 100% of suspects associated with a potential terrorist act.
- Intercept 100% of all bomb-making material deliveries going to personnel suspected of involvement in a terrorist threat that are in a quantity necessary to make a vehicle-borne improvised explosive device (VBIED).

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- Halt or divert the deployment of a VBIED at 100% of the critical infrastructure sites evaluated as having the highest risk to cause significant loss of life or widespread loss of vital services.
- Implement quarantine stations at all ports of entry in accordance with California's communicable disease plan (s) and Centers for Disease Control (CDC) guidance.

**Screening, Search, and Detection**

- Detect, identify and locate 100% of the personnel suspected as involved in a potential terrorist act at mass gathering locations or critical infrastructure
- Discover or locate 100% of bomb-making materials obtained by personnel suspected of involvement in a potential terrorist act.
- Deploy sensors such as additional personnel to locate 100% of VBIEDs in transit.
- Implement systems to track the extent of natural (e.g. fire, flood, earthquake, pandemic, animal/plant disease), technological (e.g. hazardous material release), and man-made events (e.g. terrorist incidents) that provide designated recipients in all 58 operational areas access to real-time data.
- Maintain Memoranda of Agreement (MOA) for additional personnel and laboratory capacity in response to human pandemic and animal/plant disease.

**Access Control and Identity Verification**

- Design, implement, and annually exercise best practices and protocols in cooperation with public, private, and tribal partners to verify (with the goal of 100% accuracy through physical and technological means) the identity of 75,000 individuals authorized admittance to the area affected by an incident.

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- Coordinate with local governmental entities to control access by additional temporary workers to the affected areas during recovery using physical checks of badges or identification cards for a period starting no later than 24 hours after an incident and lasting until the area is declared safe for the general public to re-enter.
- Implement credentialing program with public, private and tribal partners to verify identity and authorization to work in a contaminated area for first responders from multiple federal, state, and local agencies during a response.
- Control access to quarantine stations at all ports of entry or other designated quarantine area in accordance with California's communicable disease plan(s) and CDC guidance.

**Cybersecurity**

- Design, implement, and annually exercise a Cyber Response Plan that outlines procedures for all phases of the emergency management cycle when addressing cyber threats and hazards.
- Disseminate updates to best practices for cybersecurity on a quarterly basis.
- Implement updated/current cybersecurity technology, protocols, and user training at the state level to protect computer and telecommunications networks needed in a large-scale incident response from technical and non-technical attacks (e.g. strong passwords, firewalls, software updates/patches of operating system, access control to restricted data, employee information assurance training, and open network encryption).
- Assess cyber threats and provide countermeasures in accordance with California Department of Technology guidelines to protect critical infrastructure within 24 hours of an incident.

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### **Physical Protective Measures**

- Identify physical measures to protect borders, critical infrastructure, and/or the citizens of California in a collaborative process between federal, state and local partners.
- Prioritize employment of identified measures at critical infrastructure assets according to existing federal, state, and local risk-based criteria.
- Implement measures at the state and local level in cooperation with federal and private partners to reduce risk at the highest priority assets to include increased protective measures at 100 high risk critical infrastructure sites across California through the use of cameras, sensors, barriers, lighting, or other identified physical protective measures.
- Train 3,000 state and local law enforcement personnel on critical infrastructure assessment methods and protective measures such as on-site vulnerability assessments, critical infrastructure or intelligence analysis techniques, risk-reduction methodologies, counter IED training, and terrorist activity indicators, warnings and pre-operational surveillance tactics.

### **Risk Management for Protective Programs and Activities**

- Identify 100% of threats and hazards of concern to all communities, organizations and individuals affected by the eight core capabilities listed as Protective in the National Preparedness Goal through the regional catastrophic plans, State Hazard Mitigation Plan, local mitigation plans and the State Preparedness Report.
- Assess impacts posed by identified threats and hazards to regions, at-risk populations, critical infrastructure sectors and individual critical infrastructure assets.
- Prioritize risk according to existing federal, state, and local risk-based criteria.

### **Supply Chain Integrity and Security**

- Execute mitigation planning and annual exercises that examine security and resilience of supply chains to support three million people requiring food and other commodities due

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to lack of services, loss of residence, or as visitors or commuters stranded by a potentially catastrophic incident.

- Prioritize top lifelines (water, power, fuel, transportation and communications) to assist in the re-establishment of essential services and movement of critical resources.
- Maintain and enhance state laboratory system equipped for rapid identification of select agents in order to determine in conjunction with federal partners whether products and animals are free from these agents and to assist in the response to simultaneous multi-jurisdictional outbreaks of animal disease or the appearance of contamination in high-risk food-products.

### **Community Resilience**

- Implement a sustainable California community resilience strategy that coordinates a public information campaign concerning resiliency, supports Community Emergency Response Team (CERT) and other volunteer-based programs, and establishes community information systems for mitigation and response.
- Develop and maintain plans that coordinate the activities of California communities and private sector partners through state, local, and federal emergency management functions before, during, and after an incident in order to prevent and mitigate emergencies, expedite response activities, maximize resources, and facilitate a return to normalcy.
- Continue to develop public and private partnerships in order to promote key relationships with private industry via Memoranda of Understanding (MOU), allowing delivery of goods and services through a clear, formalized process that is made available to the California State Operations Center.
- Make risk information concerning major threats and hazards such as earthquake, flood, and wildfire available to the public to assist in understanding risks faced by individual property owners and the community through web-based or other easily accessible means.

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### **Long-term Vulnerability Reduction**

- Review the State Hazard Mitigation Plan every five years and implement all recommendations relevant to the development and sustainment of resilient systems, communities, and critical infrastructure.
- Promote business continuity plans, physical assessments of critical infrastructure, retrofitting of state structures, and planning groups consisting of subject matter experts/stakeholders that identify community lifelines, determine vulnerabilities, and close gaps in resilience, in accordance with the state and local plans.
- Support the creation and maintenance of resilient systems, communities, and critical infrastructure lifelines throughout California (e.g. increase laboratory capacity and reliability of medical reporting systems for pandemic and animal disease, promote business continuity plans, establish cybersecurity guidelines for key services, and establish ordinances and building codes for earthquake resistant structures in accordance with recognized best practices).

### **Risk and Disaster Resilience Assessment**

- Assess the impacts of identified incidents so that decision makers, responders, and community members can design and implement long term, cost effective mitigation measures (actions) to reduce their entity's risk and increase their resilience as part of an established After-Action Review (AAR) process.
- Provide risk assessment tools and resilience-related information gathered through planning activities to affected jurisdictions in order to establish informed and defensible capability targets and commit appropriate resources drawn from the whole community toward closing the gap between a target and a current capability, or for sustaining existing capabilities.
- Develop a Statewide Risk Management Plan modeled upon the National Infrastructure Protection Plan risk management framework.
- Establish priorities for recovery operations as part of a review of catastrophic plans or other strategic planning activities.

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## **Threat and Hazard Identification**

- Review the threats and hazards identified in the State Hazard Mitigation Plan every five years.
- Perform an annual Threat and Hazard Identification and Risk Assessment in concert with federal, state, local, tribal, public, and private partners.
- Perform a triennial review of the Catastrophic Incident Base Plan that establishes the Concept of Operations (CONOP) for the joint federal and state response to, and recovery from, a catastrophic incident in the State of California.

## **Critical Transportation**

- Identify, within 24 hours of an incident, staging areas and other support locations for use by federal, state, local and private partners.
- Inspect, reestablish, and maintain land (including pipelines), sea, and air routes within the first 72 hours after an incident in order to move first responders into the area affected by the incident and to safely sustain approximately three million persons in the vicinity of the incident or evacuate them out of the impacted zone, including up to 12,500 persons seriously injured and 43,000 persons with injuries not requiring hospitalization.

## **Identified Critical Transportation Resource Requirements:**

- Highway Damage Assessments Teams
- Bridge Damage Assessment Teams
- Other Damage Assessment Teams
- Traffic Control Teams
- Regional and State Mass Care Plans/Emergency Plan (Catastrophic Plan)Transportation Annexes
- Memorandum Of Understanding with California Utilities Emergency Association (CUEA)

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### **Environmental Response/Health and Safety**

- Conduct health and safety hazard assessments within 36 hours of the incident by deploying hazardous material response teams and/or sensors over a geographical area spanning 7,000 square miles and containing up to 140,000 potential hazardous material incidents in order to detect, identify, contain, decontaminate, remove, dispose of, or minimize discharges of oil or the release of hazardous materials.
- Prioritize debris clearance for airfields, ports and critical supply lines during the first 72 hours.
- Deploy resources during the first 72 hours after an incident to assess, respond to, mitigate, and eliminate threats to public safety, including hazardous materials spills and releases, debris, damaged structures, and other potential public health threats.
- Restore sanitation systems within 72 hours that may potentially release untreated sewage due to damage and lack of power supply.
- Coordinate countermeasures, decontamination, and carcass disposal during simultaneous outbreaks of animal disease.

### **Identified Environmental Response/Health and Safety Resource Requirements:**

- Approximately 100 HAZMAT teams in a mix of NIMS Tier I typed HAZMAT Entry Teams (I, II, III) and non-typed teams.
- Approximately 12 Program Debris Monitor Teams
- Debris Field Monitors (? Number Undefined)
- Approximately 4 Geospatial Information Team (? Number Undefined)
- HAZMAT Mutual Aid System
- HAZMAT Response Plan
- Debris Management Plan
- Animal Disease Response Plan

### **Fatality Management**

- Support the collection, transportation and processing of 7,000 human remains within 72 hours of an incident by coordinating additional resources to establish morgues, storage sites, and Family Assistance Centers.

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- Support the collection, transportation and processing of more than 2,000 human remains per day during peak period of a pandemic.
- Coordinate deployment of federal teams to support mortuary operations, assist with DNA testing of unidentified decedents, and coordinate repatriation of remains of foreign nationals.
- Deploy resources to morgues, storage sites, and Family Assistance Centers in order to implement state and local stress management/crisis intervention strategies.

**Identified Fatality Management Requirements:**

- Approximately 30 teams with the equivalent capacity to Federal Disaster Mortuary Operational Response Teams (Expect all ten Federal Assets to be deployed to incident)
- Approximately 5 temporary morgue sites with capacity to handle in excess of 200 bodies
- Approximately 40 refrigerator trucks
- Approximately 10 local (OA) Coroner/Medical Examiner Recovery Teams
- Approximately 1,000 Volunteer (including unorganized spontaneously responding citizens) , Law, Fire, SAR or HAZMAT personnel to recovery and transport fatalities
- Coroner Mutual System with Regional and State coordinator

**Infrastructure Systems**

- Conduct exercises to identify critical infrastructure systems affected by threats and hazards of concern within California and design plans to restore them, updating the plans every two years.
- Stabilize critical infrastructure functions within the first 72 hours after an incident to include energy, transportation, telecommunications, water/wastewater services, and public health and medical systems.
- Prioritize any additional resources required to minimize ongoing threats to public health and safety, and efficiently restore systems and services to support a viable, resilient community.

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- Repair major transportation links within two years to include an estimated 42 key freeway sections, 600 destroyed bridges, 320 severely damaged bridges, rail mass transportation assets, and airport facilities.

**Identified Infrastructure Systems Resource Requirements:**

- MOU with California Utilities Emergency Association (CUEA)
- Business Utility Operations Center collocated with State Operations Center
- Business Operations Center collocated with State Operations Center

**Mass Care Services**

- Mobilize resources within 72 hours of an incident to provide life-sustaining services to the affected human and animal population consisting of an estimated three million people and 100,000 animals in potential need of shelter, potable water, sanitation disposal, secure medical treatment facilities, mental health treatment, functional needs assistance, veterinary services, and/or support to reunifying families.
- Inspect 2,600 pre-identified temporary shelter structures within the first 72 hours after an incident prior to placing them into operation.

**Identified Mass Care Services Resource Requirements:**

- Approximately 4,330 shelters with an average capacity of 150 people
- 200 Animal Shelters with an average capacity of 500 animals
- Shelter Management Teams (people) to run each shelter
- 200 Shelter Teams (animal) mix of small and large animals shelter teams
- 34 Safety Assessment Program Teams (2-person non-specialized)
- 100 Points of Distribution (PODs) (Mix of Type I, II, III)
- 100 PODs Management Teams (Typed to match types/numbers of PODs)
- Volunteer Emergency Services Team (VEST)
- State Mass Care and Shelter Plan
- Regional Mass Care and Shelter Plan or Emergency Plan Annex

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### **Mass Search and Rescue Operations**

- Coordinate the deployment of law enforcement, fire, and search and rescue assets within the first 72 hours after an incident with the capability to simultaneously search for and rescue 4,500 people plus animals spread across a variety of environments, including damaged high-rises, rural and urban areas, flooded areas, and spaces contaminated by chemical, biological, or radiological material.

### **Identified Mass Search and Rescue Operations Resource Requirements:**

- 100 Type I Urban Search and Rescue Task Forces
- 6 Air Search Team (Fixed-Wing)
- Approximately 5,500 Volunteers/Animal health specialists for animal rescue

### **On-scene Security and Protection**

- Coordinate the deployment of local, state, and federal law enforcement resources within the first 72 hours after an incident over a 7,000 square mile area to conduct life-safety, security, and public order activities.
- Sustain post-incident security for up to several months after the incident through coordinated mutual aid from jurisdictions outside the affected region using local, state and federal law enforcement and/or security assets to control access, maintain order, and secure key facilities such as shelters, points of distribution, base camps, and government installations.
- Coordinate with local law enforcement and private security companies to update Memoranda of Agreement (MOA) and contracts to support security and protection efforts in affected areas.

### **Identified On-scene Security and Protection Resource Requirements:**

- 13,000 Sworn Peace Officers
- 24,000 Additional Security Personnel

### **Operational Communications**

- Establish and maintain interoperable emergency communications within the first 72 hours after an incident by deploying emergency communications assets to support incident response organizations.

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- Reestablish regional communications within 24 hours that capture situational awareness at the state level.
- Conduct communications exercises annually to train responders and civilian aid groups, and to identify gaps in communications systems.

**Identified Operational Communications Resource Requirements:**

- Statewide Communications Plan
- 3 Mobile Emergency Response Support (MERS) Installations
- 75 Deployable Radio/Microwave Repeaters
- 33 Mobile OASIS Units or equivalent
- A minimum of 150 Portable Satellite Phones
- 75 Mobile Command, Communications, and Interoperability units/centers
- Statewide EOC Situational Awareness/Mission Tasking system (Cal EOC)
- Communications Damage Assessment Teams (Approximately 100 personnel)
- Communications installation/repair/support personnel (Minimum of 300 personnel)
- Memoranda of Understanding with communication service providers (CUEA)

**Public and Private Services and Resources**

- Reestablish essential public and private services and resources to the affected population and surrounding communities through a collaborative process involving state, local, tribal and private sector entities during the first 72 hours after an incident.
- Sustain and expand MOU programs to identify and use state, local, tribal and private sector services and resources for community-wide deployment of assets to re-establish essential services disrupted by a disaster, continue maintenance of essential services during the response to the disaster, and restore all services following a disaster.
- Exercise MOU programs dealing with public and private services and resources every two years.

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**Identified Public and Private Resources Resource Requirements:**

- MOU with California Utilities Emergency Association (CUEA)
- Business Utility Operations Center collocated with State Operations Center
- Business Operations Center collocated with State Operations Center
- Statewide Mutual Aid System

**Public Health and Medical Services**

- Complete triage and initial stabilization during the first 72 hours after an incident of 12,500 people with serious injuries and an additional 43,000 other people requiring medical treatment, but not hospitalization.
- Assess damage to all hospitals, other health care facilities, laboratories, and supporting utility systems within the area affected by a catastrophic event during the first 72 hours after the incident.
- Identify shortages of medical equipment, health supplies and personnel during the first 72 hours after an event and prioritize the transportation of assistance into the affected area.
- Gather resources during the first 72 hours after an incident in order to establish Government-Authorized Alternate Care Sites and other mechanisms for treatment no later than 72 hours of an incident.
- Integrate state, local, and federal pandemic plans and protocols to improve rapid, prioritized medical countermeasure deployment.
- Strengthen epidemiological surveillance and investigation capabilities through the use of web-based system linking state and local government, clinical, and field reporting of disease detection and surveillance.

**Identified Public Health and Medical Services Resource Requirements:**

- 125 Ambulance Task Forces
- An additional 622 2-person Ambulance Crews mobilized by E+72
- 6-10 Epidemiological Survey Teams

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- Minimum of 12,500 Additional Hospital Beds (for number of people in need of hospitalization due to injuries suffered in the incident) in a mix of mobile hospitals and alternate care sites or at hospitals outside affected area if transport is possible
  - Up to 15 mobile hospitals with a minimum capacity of 200 beds and staffed with specialized medical teams
  - Remaining beds in alternate facilities built out in blocks of 50 bed units.
- Hospital Assessment Teams (various types/organizations)
- Temporary Hospital Certification Teams
- Public Health Emergency Operations Center

**Situational Assessment**

- Provide all local, state, and federal decision makers with decision-relevant information during the first 72 hours after an incident regarding the nature and extent of the event by completing an impact assessment that includes all of the critical information requirements needed by emergency operations centers in accordance with state catastrophic and operations plans.
- Share information on an ongoing basis to all authorized first responders, emergency managers, and public/private partners concerning potential or ongoing incidents through designated tools, to include internet accessible databases, geographic information systems (GIS), and standardized report formats.
- Address, in operational plans, essential elements of information (EEI) needed by emergency managers to effectively coordinate the response to a catastrophic incident, conduct an exercise with decision makers annually to validate EEI, and update the plans at least every two years.

**Identified Situational Assessment Resource Requirements:**

- System of Emergency Operations Centers
- Unified Reporting System, e.g. Cal EOC
- State Emergency Plan

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### **Economic Recovery**

- Identify infrastructure sites in collaboration with private sector partners that contribute to resilience, accessibility, and sustainability that are in need of restoration within one year after an incident.
- Maintain systems at the state and local level to assist individuals, private entities, and public organizations recover from declared disasters in accordance with applicable state and local laws, regulations and policies.
- Remove 81 million tons of debris, consisting of building materials, personal property, and sediment generated by an incident within six months of the event.

### **Health and Social Services**

- Restore health services within 60 days after an incident for approximately 1 million individuals displaced by an incident to include providing acute care (hospital/EMS) and chronic care (medical special needs, mental health), conducting patient evacuation/movement, maintaining public health related systems and programs (food assistance, water delivery, vector control, food and water quality inspection, disease surveillance) and supporting ongoing mandatory and self-evacuations.
- Restore social service networks after an incident by means that include the rapid deployment of CalWORKs program sites into the affected area along with eligibility workers in sufficient numbers to assist the affected population.
- Exercise the ability to mobilize and provide disaster relief in order to determine the gaps in health and social services, and update plans every year.

### **Identified Health and Social Services Resource Requirements:**

- Preliminary Damage Assessment Teams
- Disaster Survivor Assistance Teams
- Information system for distributing health related information (The California Health Alert Network)
- Disaster Health Volunteers
- Disaster Behavioral Health Plan

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- Mass Care Plan
- Disaster Recovery Centers

**Housing**

- Determine on an ongoing basis the number/type of housing units impacted in state regions under various threats and hazards identified at the state and local level through predictive modeling.
- Create Memoranda of Agreement (MOA) with private entities and between government agencies that can provide temporary housing and update the MOAs every two years.
- Provide immediate sheltering after an incident for 542,000 people and 100,000 animals with provisions to last at least 60 days.
- Assess incident caused structural damages to 100% of affected residential housing within 30 days.
- Transition to temporary housing, including the use of rebuilt or repaired homes or other temporary housing within 60 days after an incident.

**Identified Housing Resource Requirements:**

- Safety Assessment Program Teams
- Transitional Shelters/Housing Unit for 180,000 people (Two weeks to Six Months)
- 30,000 Temporary (Interim) Housing Units (Six Months to 2 Years)

**Natural and Cultural Resources**

- Collaborate with California state agencies, tribal, private, public, and federal partners and those investigating the incident to assess 100% of natural and cultural assets within the affected area and mitigate impacts to these sites within 60 days after an incident.

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- Address recovery efforts within one year after the event for natural resources including watershed protection, reforestation and ecosystem restoration, and within two years, repair and restore affected cultural resources.

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**Annex Two**

**Details of Threat and Hazard Identification and Risk Assessment**

What is the Report: Threat and Hazard Identification and Risk Assessment (THIRA) is an annual report that began in 2012.

Contents: A standard process for identifying community-specific threats and hazards and setting capability targets for each core capability identified in the National Preparedness Goal as required in Presidential Policy Directive (PPD) 8. New guidance for 2013 expands the THIRA process to include estimation of resources needed to meet the capability targets.

Who is Involved: Cal OES Infrastructure Protection Division compiles the THIRA to inform the Planning Division's State Preparedness Report. Both divisions speak with multiple stakeholders, public and private, during the process. Cal OES submits both reports together to DHS/FEMA through Region IX before the end of the calendar year.

What is the purpose: The THIRA process helps communities identify capability targets and resource requirements necessary to address anticipated and unanticipated risks. It is also required for Preparedness Grants.

**THIRA FY 2014 4-Step Process**

The four-step process for developing a THIRA:

1. **Identify the Threats and Hazards of Concern.** Based on a combination of experience, forecasting, subject matter expertise, and other available resources, identify a list of the threats and hazards of primary concern to the community.
2. **Give the Threats and Hazards Context.** Describe the threats and hazards of concern, showing how they may affect the community.
3. **Establish Capability Targets.** Assess each threat and hazard in context to develop a specific capability target for each core capability identified in the National Preparedness Goal. The capability target defines success for the capability.
4. **Apply the Results.** Estimate the resources required for each core capability to achieve the capability targets through the use of community assets and mutual aid while also considering preparedness activities, including mitigation opportunities.

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**Table 7: Example Completed THIRA**

Threat/Hazard	Earthquake	Terrorism
<b>Context Description</b>	A magnitude 7.8 earthquake along the Mainline Fault occurring at approximately 2:00 PM on a weekday with ground shaking and damage expected in 19 counties, extending from Alpha County in the south to Tau County in the north, and into the Zeta Valley.	A potential threat exists from a domestic group with a history of using small IEDs in furtherance of hate crimes. There are a number of large festivals planned during the summer at open air venues that focus on various ethnic and religious groups. These events draw on average 10,000 attendees daily.
<b>Core Capability: Mass Search and Rescue Operations</b>		
<b>Capability Target</b>	Within 72 hours, rescue: <ul style="list-style-type: none"> <li>▪ 5,000 people in 1,000 completely collapsed buildings</li> <li>▪ 10,000 people in 2,000 non-collapsed buildings</li> <li>▪ 20,000 people in 5,000 buildings</li> <li>▪ 1,000 people from collapsed light structures.</li> </ul>	
<b>Resource Requirement</b>		
	<b>Resources</b>	<b>Number Required</b>
	Type I US&R Task Forces	10
	Type II US&R Task Forces	38
	Collapse Search and Rescue (S&R) Type III Teams	100
	Collapse S&R Type IV Teams	20
	Canine S&R Type I Teams	20

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**Annex Three**

**Details of THIRA Capability Estimation**

(Adapted from FEMA CPG 201, Second Edition)

In the last step of the FY 2014 THIRA communities apply the results of the THIRA by estimating the resources required to meet capability targets. To estimate resource requirements, communities should define key teams, personnel, equipment, and supplies needed to implement capability targets. Communities should avoid developing very detailed, tactical-level task lists. Rather, communities should strive to identify mission-critical activities and describe supporting resources in standardized terms established through a resource typing process.

To identify quantity and types of resources, communities can use existing tools and information sources, such as:

- Strategic, operational, catastrophic, and/or tactical plans
- Resource typing data such as NIMS-typed resources
- Existing capacity analysis and capability calculators
- Data regarding resources frequently requested through mutual aid

Through this process, communities should identify the resources from across the whole community needed to meet capability targets.

Communities should develop resource requirements expressed as a list of NIMS-typed resources or other standardized resources. Resource typing helps communities request and deploy needed resources through the use of common terminology. Resource typing is categorizing, by capability, the resources requested, deployed, and used in incidents.

FEMA categorizes and describes several types of standardized, deployable resources. Measurable standards identifying resource capabilities and performance levels serve as the basis for these categories. These NIMS-typed resource definitions include the composition and capabilities of teams, personnel, equipment, and supplies commonly deployed in incidents. FEMA refers to NIMS-typed resources as Tier I resources.

Communities should also consider resources standardized by entities other than FEMA when developing their resource requirements. For example, state, tribal, and local governments sometimes establish standardized definitions of deployable resources. FEMA refers to these state, tribal, and local-typed resources as Tier II-typed resources.

Communities should identify resources at a manageable level of detail. Identifying teams or “packages” of people, equipment, and associated training allows for comparison across jurisdictions.

# State of California Threat and Hazard Identification and Risk Assessment (THIRA)

Table 1: Desired Level of Detail for Resource Typing<sup>3</sup>

Too Broad	Recommended	Too Detailed
All adequate personnel to meet the outcome	1 Type 3 Case Management Team	1 operations manager 1 team leader 1 case management supervisor 1 case manager 1 community coordination specialist

Table 2: THIRA Capability Estimate<sup>4</sup>

**Example of Capability Estimation**

Consider a community trying to estimate the number of Urban Search and Rescue (US&R) Task Forces needed for its Mass Search and Rescue Operations resource requirement. The community should first consider the types of buildings located within the affected area (e.g., high-rise buildings, non-combustible, mid-rise). This information helps determine the level of effort and skill required to conduct effective search and rescue. For example, if the community can estimate the number of buildings in each category, the average number of floors per building in each category, and the average area per floor in each category, the community can derive rough estimates of the number of floors and total square footage first responders would need to search in response to a major incident. The community’s firefighters, public works staff, building owners, or building inspectors can provide this information to planners.

The community is planning for mass search and rescue in its downtown area. An examination of the area’s building stock finds that most buildings are high-rise structures constructed of concrete and protected steel. In consideration of their building stock and the occupancy of the buildings, the community reaches out to its existing search and rescue expertise as well as that from other jurisdictions to get a recommendation of possible solutions. As a result of their analysis, the community determines that highly skilled Type I US&R Task Forces are needed to deal with the requirements while other resources can be used more efficiently and effectively to deal with less challenging search and rescue needs.

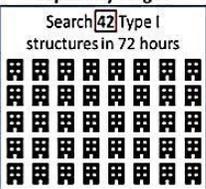
Specialized knowledge can be instrumental in helping to address the following types of questions that arise when estimating resource requirements:

- What resources are appropriate for achieving capability targets?
- What are the typical performance characteristics of those resources?
- How might performance vary depending on the local conditions?

The community could use the following calculation to estimate resource requirements.

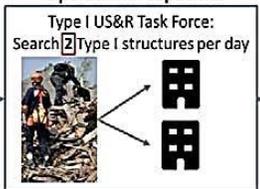
**Capability Target**

Search 42 Type I structures in 72 hours



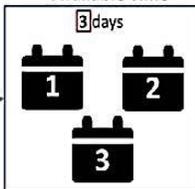
**Operational Capacities**

Type I US&R Task Force: Search 2 Type I structures per day



**Available Time**

3 days



=

**Resources Required**

7 US&R Type I Task Forces



This example calculation highlights the importance of including subject matter experts from the whole community in the THIRA process.

<sup>3</sup> CPG 201: Threat and Hazard Identification and Risk Assessment Guide, Second Edition (FEMA, August 2013), 17.

<sup>4</sup> CPG 201: Threat and Hazard Identification and Risk Assessment Guide, Second Edition (FEMA, August 2013), 17.

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Table 3: Example of a Core Capability with context, target, and resource estimation<sup>5</sup>

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<sup>5</sup> CPG 201: Threat and Hazard Identification and Risk Assessment Guide, Second Edition (FEMA, August 2013), 18.

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**Annex Four**

**Resources**

**Additional information about the THIRA may be found through the following links:**

**California Governor's Office of Emergency Services THIRA Web Page**

<http://www.calema.ca.gov/InfrastructureProtection/Pages/THIRA.aspx>

**Comprehensive Preparedness Guide 201: Threat and Hazard Identification and Risk Assessment (THIRA), Second Edition (August 28, 2013)**

<http://www.fema.gov/library/viewRecord.do?id=5823>

**Comprehensive Preparedness Guide 101: Developing and Maintaining Emergency Operations Plans, Version 2**

<http://www.fema.gov/media-library/assets/documents/25975?id=5697>

**Presidential Policy Directive: 8-National Preparedness**

<http://www.dhs.gov/presidential-policy-directive-8-national-preparedness>

**National Preparedness Goal**

<http://www.fema.gov/pdf/prepared/npg.pdf>

**Crosswalk of Target Capabilities to Core Capabilities**

<https://www.preparingtexas.org/Resources/documents/TDEM%20Training/Capabilities%20crosswalk.pdf>

**THIRA Frequently Asked Questions FY 2012**

<http://www.fema.gov/library/viewRecord.do?fromSearch=fromsearch&id=6198>

**Federal Resource Typing (NIMS-Tier I)**

<http://www.fema.gov/resource-management>