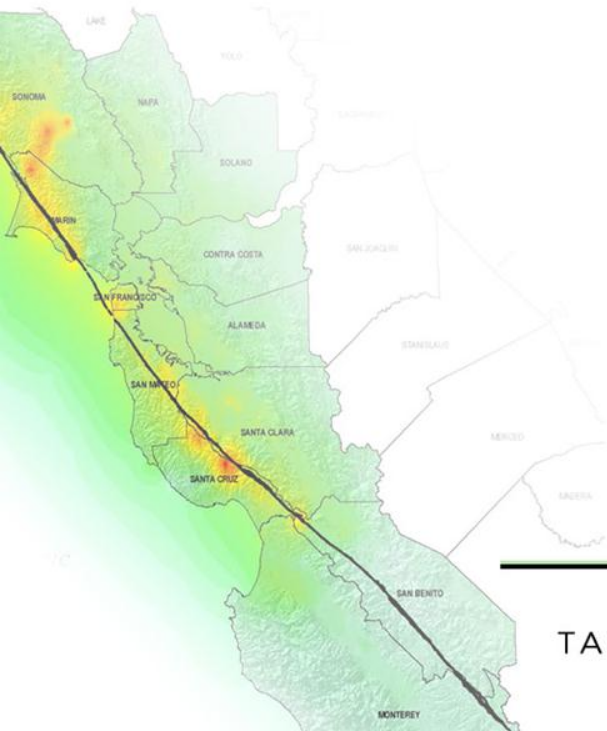


# Debris Removal Tabletop Exercise

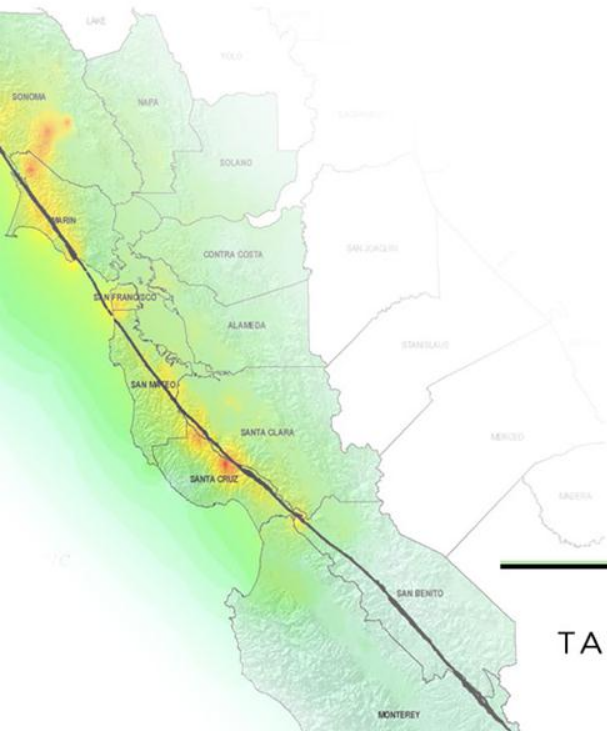
July 9, 2013



TABLETOP EXERCISE



# Openings, Introductions, & Overview

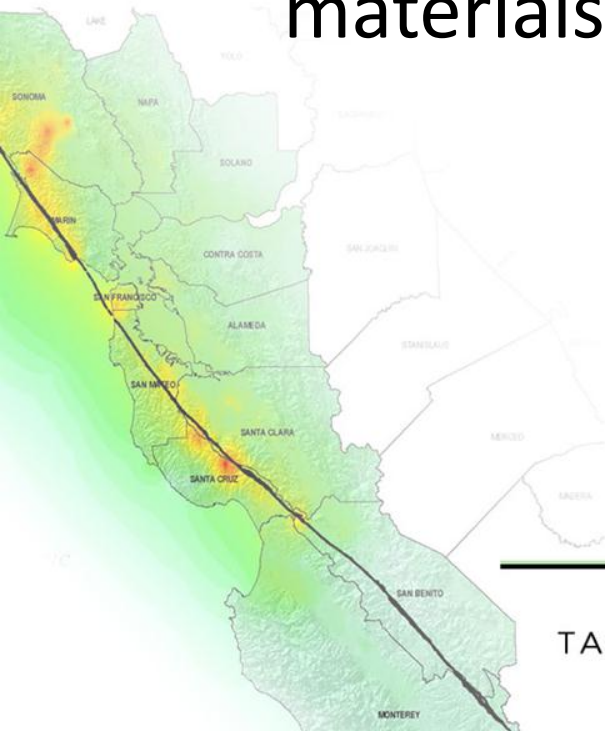


TABLETOP EXERCISE



# Welcome: Sign In

- Please sign in if you have not already done so!
- Did you pick up a copy of workshop materials?

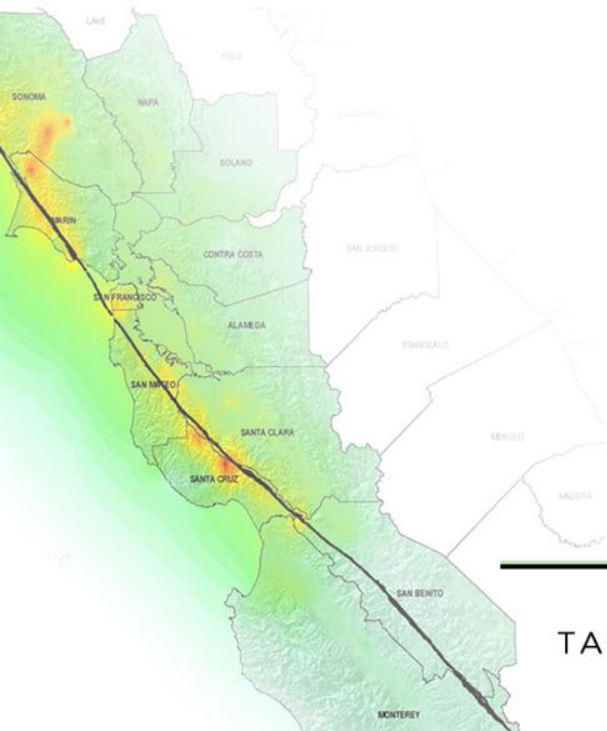


TABLETOP EXERCISE



# Housekeeping

- Restrooms
- Cell phones
- Emergencies
- Breaks

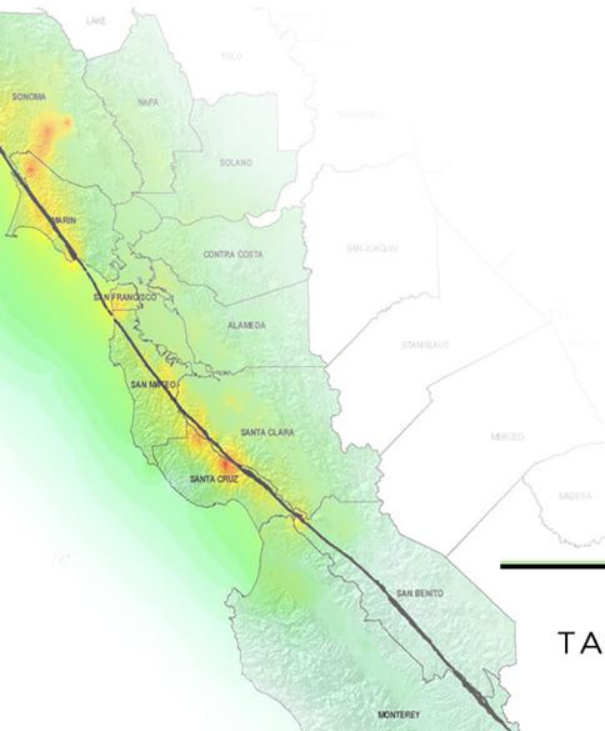


TABLETOP EXERCISE



# Introductions

- Bay Area UASI
- Facilitators
- Participants

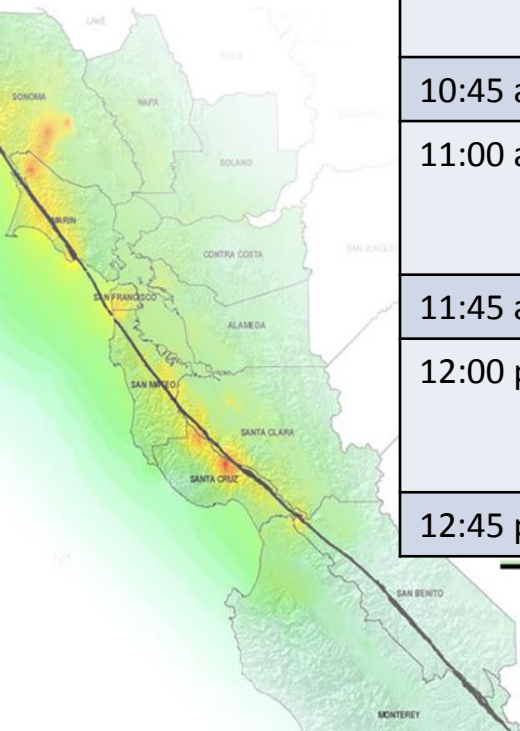


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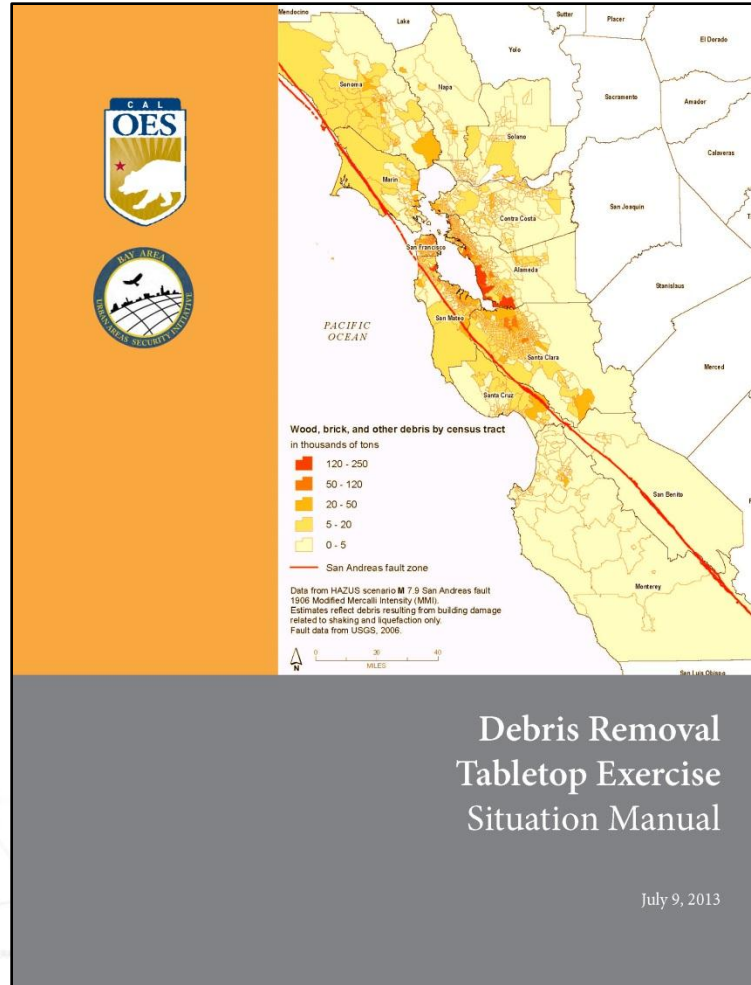
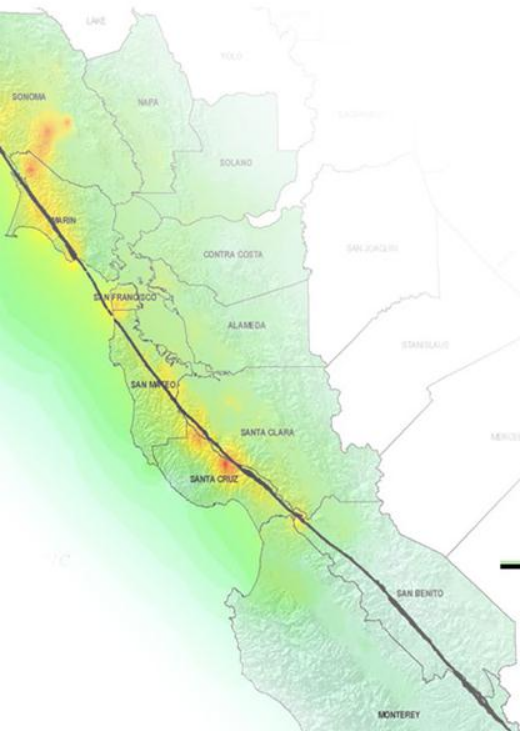


# Agenda

Time	Activity	Format
9:00 am	Openings, Introductions, & Exercise Overview	Presentation
9:15 am	Debris Removal/Management Plan Relationships Overview	Presentation
9:45 am	Regional Catastrophic Earthquake Debris Removal Plan Overview	Presentation
10:00 am	Module 1: Debris Task Force	Presentation / Moderated Discussion
10:45 am	Break	
11:00 am	Module 2: Debris Clearance Priorities	Presentation / Moderated Discussion
11:45 am	Break	
12:00 pm	Module 3: Staging and Disposal	Presentation / Moderated Discussion
12:45 pm	Hot Wash / Closing Comments	Presentation



# Handouts: Situation Manual

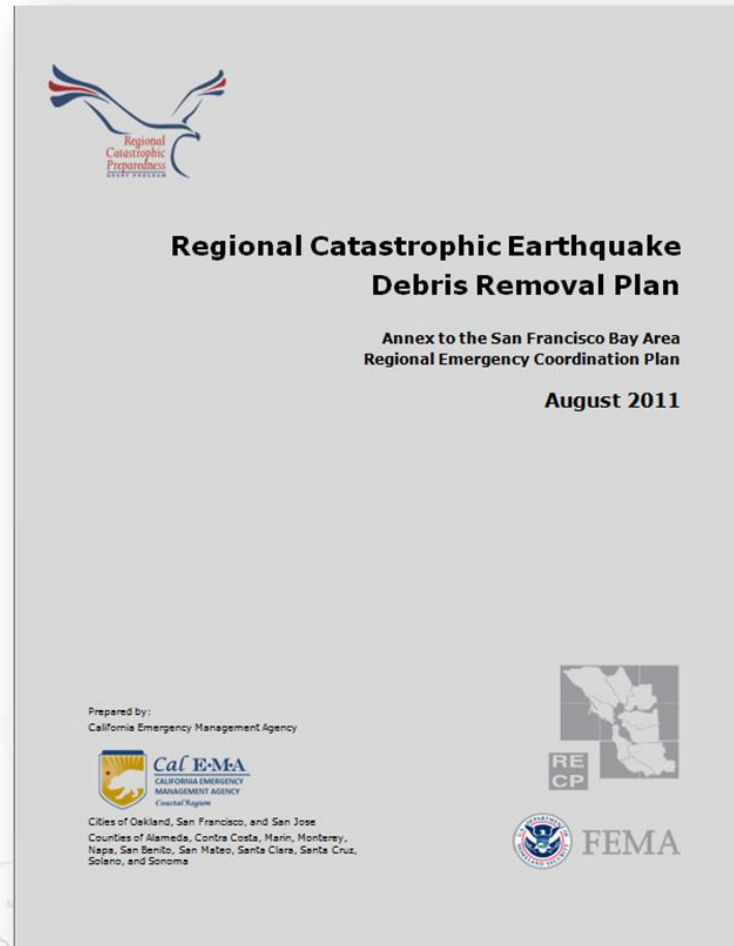
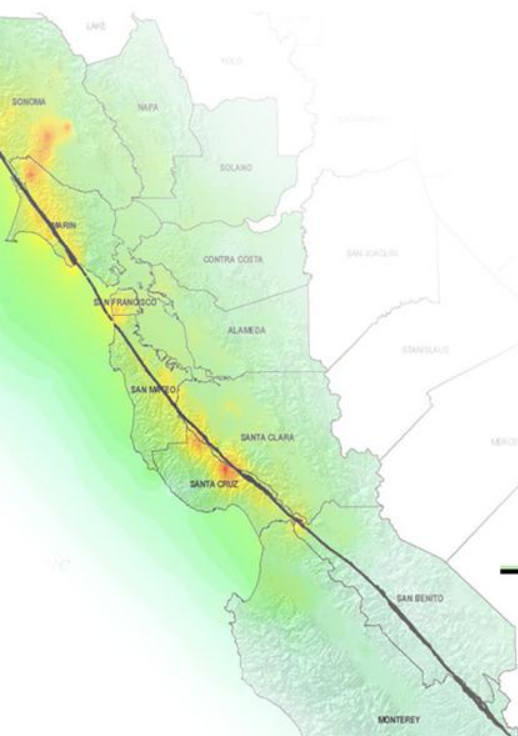


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# Handouts: Regional Catastrophic Earthquake Debris Removal Plan



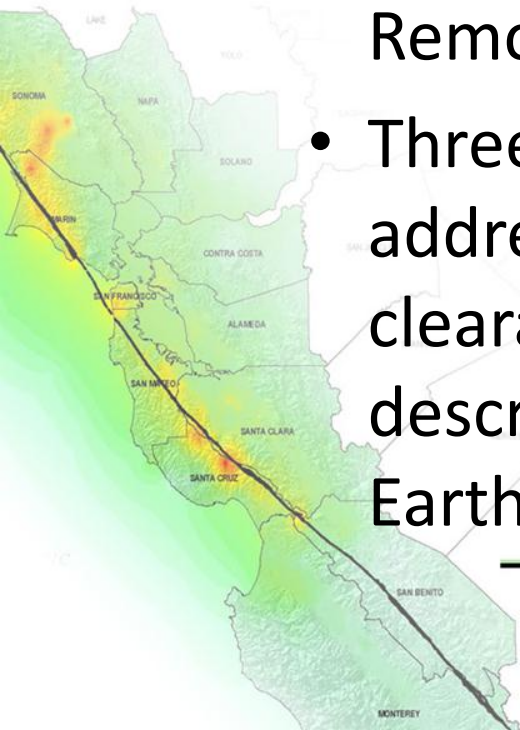
TABLETOP EXERCISE





# Exercise Scope

- Exercise play is limited to four hours
- Educational presentation of the local, regional, State, and Federal debris removal/management plans, including the Regional Catastrophic Earthquake Debris Removal Plan
- Three facilitated discussion modules addressing the Debris Task Force, debris clearance priorities, and staging and disposal described in the Regional Catastrophic Earthquake Debris Removal Plan

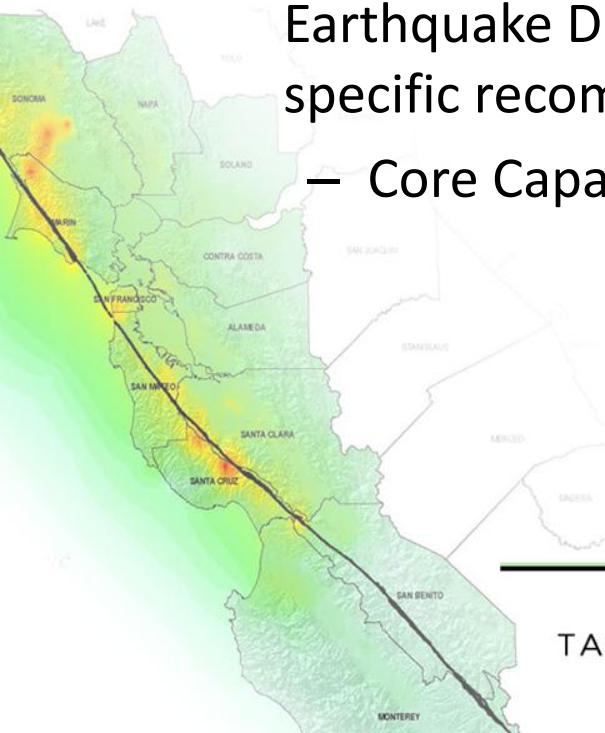


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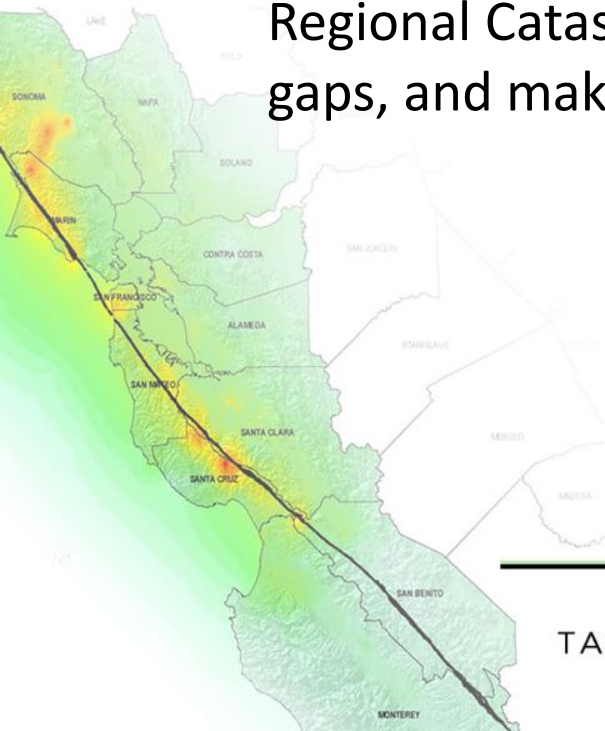
# Objectives and Core Capabilities

- Objective 1: Develop a better understanding of the relationships between debris removal/management plans at the local, regional, State, and Federal levels
  - Core Capability: Planning
- Objective 2: Review key aspects of the Regional Catastrophic Earthquake Debris Removal Plan, discuss issues, and make specific recommendations.
  - Core Capability: Planning



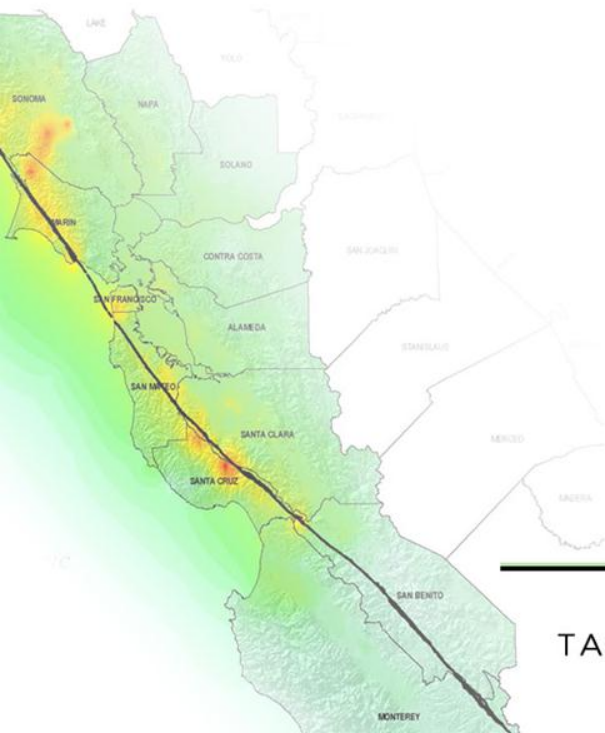
# Objectives and Core Capabilities

- Objective 3: Examine the Debris Task Force identified in the Regional Catastrophic Earthquake Debris Removal Plan, discuss issues, and make specific recommendations.
  - Core Capability: Planning and Operational Coordination
- Objective 4: Discuss debris clearance priorities defined in the Regional Catastrophic Earthquake Debris Removal Plan, identify gaps, and make specific recommendations.



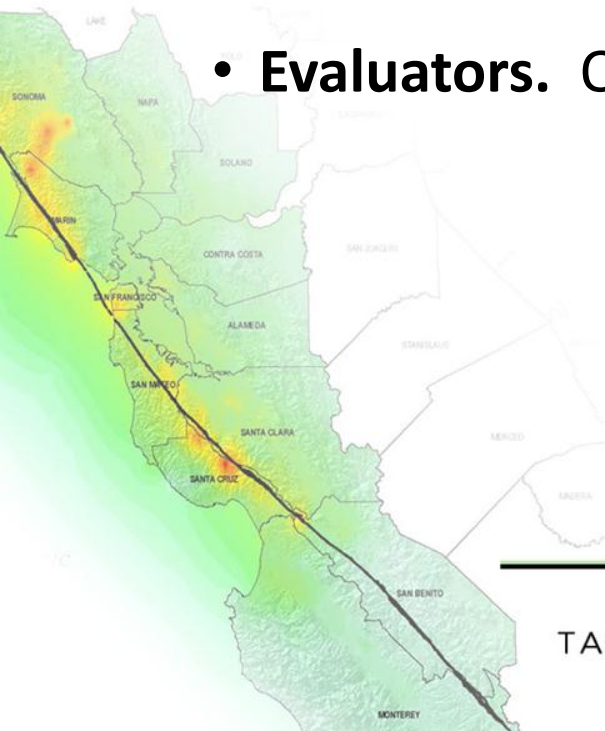
# Objectives and Core Capabilities

- Objective 5: Evaluate staging and disposal operations defined in the Regional Catastrophic Earthquake Debris Removal Plan, discuss issues, and make specific recommendations.
  - Core Capability: Planning and Operational Coordination



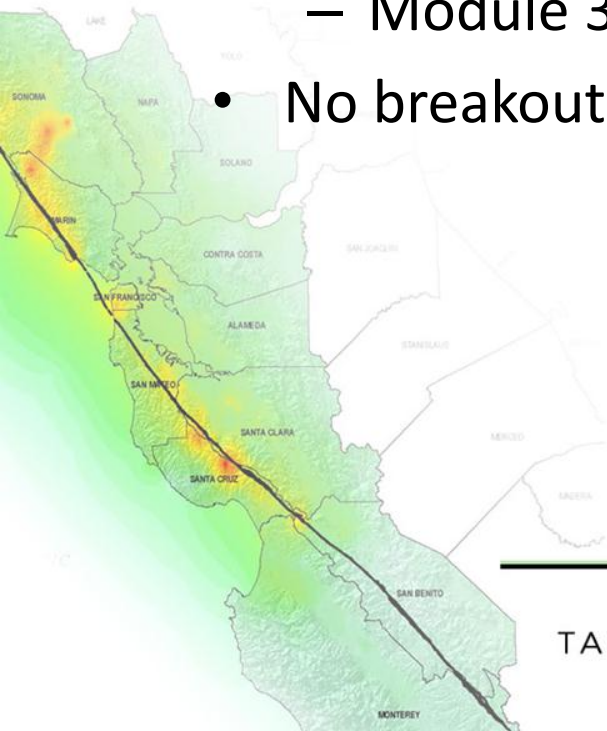
# Participant Roles and Responsibilities

- **Players.** Respond to situation presented based on current plans, policies, and procedures
- **Observers.** Support players in developing responses, but do not participate in moderated discussion
- **Facilitators.** Provide situation updates and moderate discussions
- **Evaluators.** Observe and document player discussions



# Exercise Structure

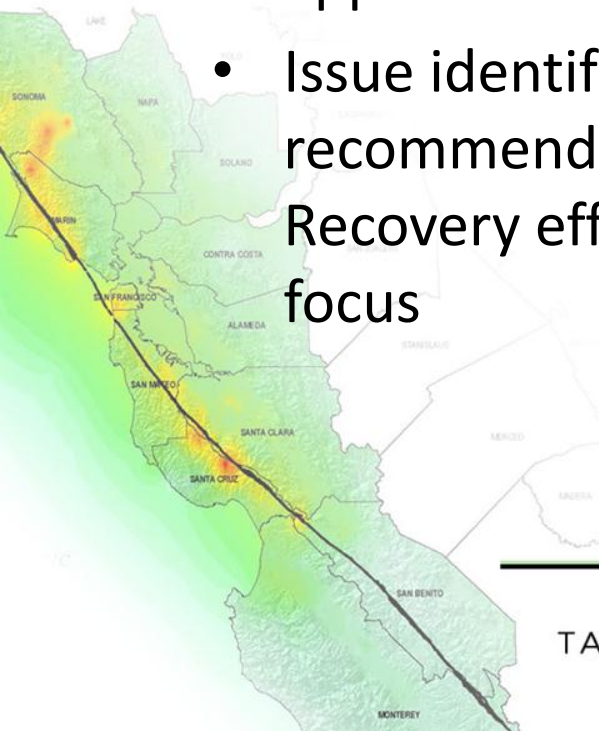
- Exercise will include an educational component on debris removal/management plans
- Multimedia, facilitated exercise, with three modules:
  - Module 1: Debris Task Force
  - Module 2: Debris Clearance Priorities
  - Module 3: Staging and Disposal
- No breakout groups, will discuss questions together





# Exercise Guidelines

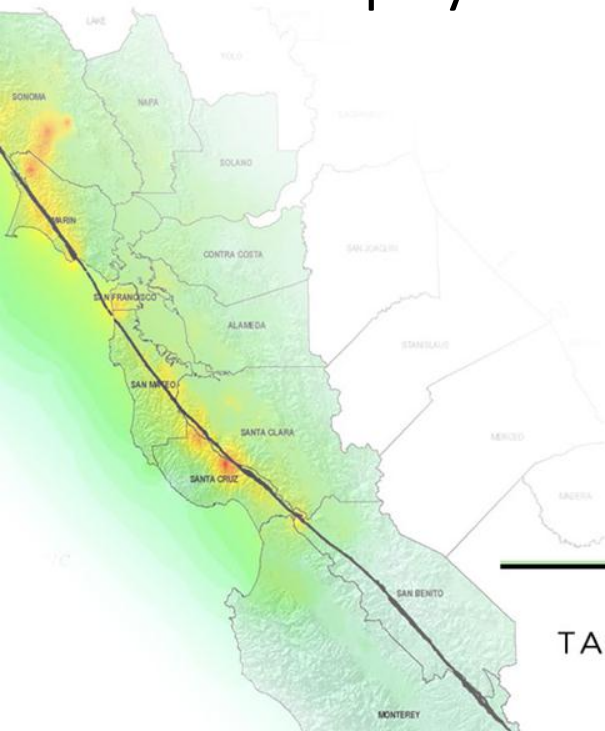
- This is an open, low-stress, no-fault environment. Varying viewpoints, even disagreements, are expected
- Base your responses on the current plans and capabilities of your organization
- Decisions are not precedent setting; consider different approaches and suggest improvements
- Issue identification is not as valuable as suggestions and recommended actions that could improve Response and Recovery efforts; problem-solving efforts should be the focus



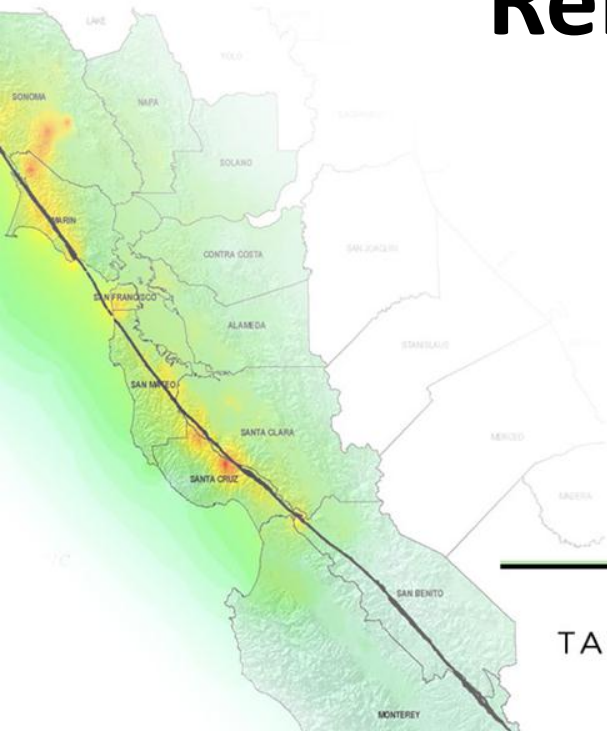


# Assumptions and Artificialities

- The exercise is conducted in a no-fault learning environment wherein capabilities, plans, systems, and processes will be evaluated
- The exercise scenario is plausible, and events occur as they are presented
- All players receive information at the same time



# Debris Removal/Management Plan Relationships Overview



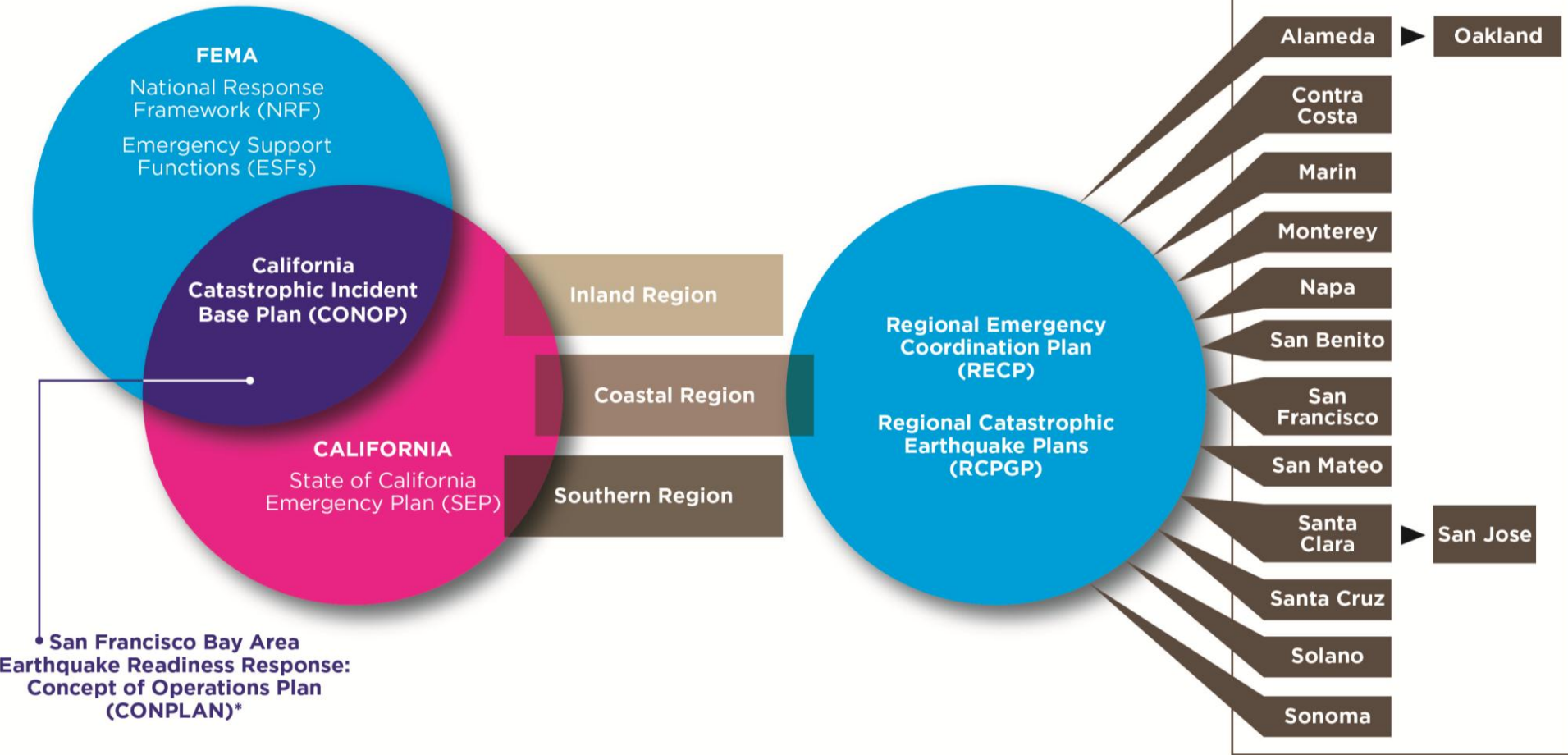
TABLETOP EXERCISE



# Debris Removal/Management Plan Relationships Overview

## Emergency Plan Relationships

Federal ▶ State ▶ Region ▶ Operational Area ▶ Local Government



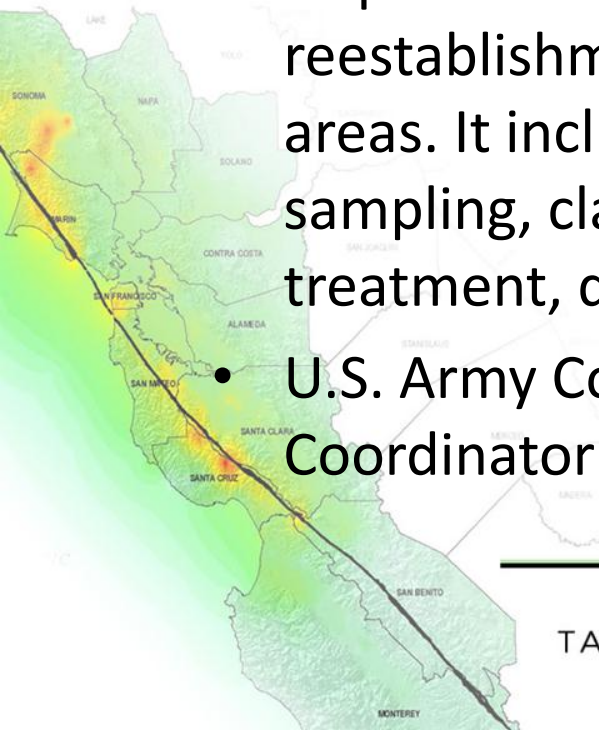
\*Only applies to Coastal Region, specifically the San Francisco Bay Area counties of: Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma.

# Debris Removal/Management Plan

## Relationships Overview

Emergency Support Function (ESF) #3 - Public Works and Engineering Annex:

- National Response Framework
- Defines responsibility for managing, monitoring, and/or providing technical advice in the clearance, removal, and disposal of debris from public property and the reestablishment of ground and water routes into impacted areas. It includes actions related to debris including waste sampling, classification, packaging, transportation, treatment, demolition, and disposal
- U.S. Army Corps of Engineers is assigned as the Coordinator



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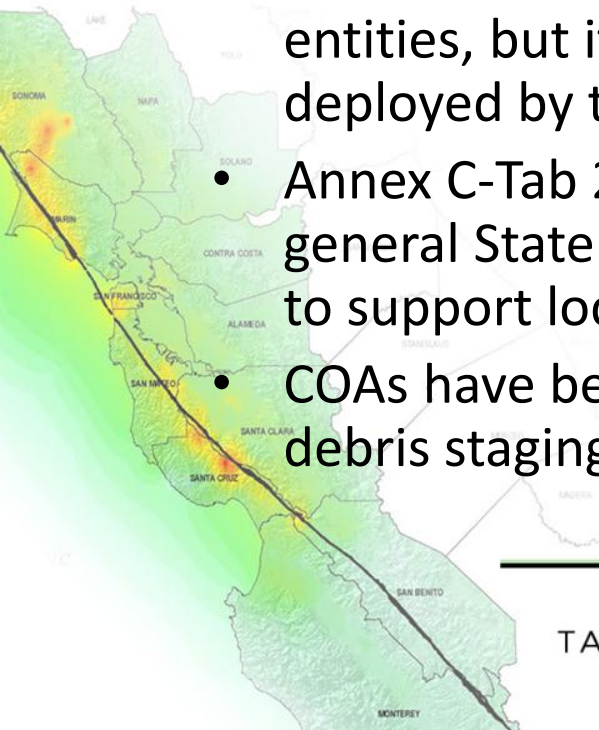


# Debris Removal/Management Plan

## Relationships Overview

San Francisco Bay Area Earthquake Readiness Response: Concept of Operations Plan, Annex C-Tab 2, Debris Management:

- Referred to as the CONPLAN
- Describes the joint response of the State and Federal governments to a M 7.9 earthquake on the San Andreas Fault in the Bay Area
- Does not describe the specific response efforts of these entities, but it does describe the resources that will be deployed by the Federal Government
- Annex C-Tab 2 presents Course of Actions (COAs) which are the general State and Federal alternative actions that will be taken to support local response operations
- COAs have been defined for debris clearance, debris removal, debris staging, and disposal



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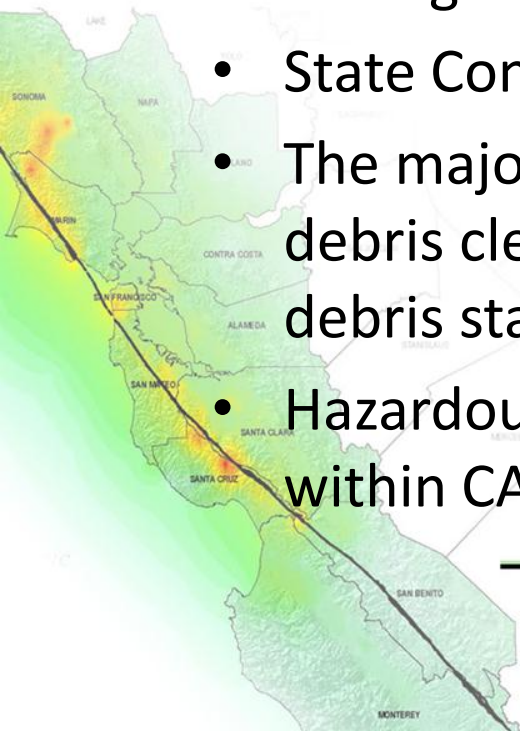


# Debris Removal/Management Plan

## Relationships Overview

California Emergency Function (CA-EF) 3 Construction and Engineering:

- State Emergency Plan
- Responsible for the delivery of services, technical assistance, engineering expertise, construction management, and other support to local jurisdictions
- State Consumer Services Agency is the lead agency
- The majority of debris management activities, including debris clearance, debris removal, safety assessments, and debris staging and disposal are addressed under CA-EF 3
- Hazardous spills and hazardous waste are addressed within CA-EF 10 Hazardous Materials and Oil



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# Debris Removal/Management Plan

## Relationships Overview

Regional Emergency Coordination Plan (RECP):

- Provides an all-hazards framework for collaboration among responsible entities and coordination during events that affect the Bay Area region
- Defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area region within the framework of the Standardized Emergency Management System (SEMS)
- Describes the formation of a Regional Coordination Group (RCG) among the Cal OES Coastal Regional Emergency Operations Center (REOC) and the Operational Area (OA) lead agencies for the Bay Area counties
- Base plan does not directly address debris management operations



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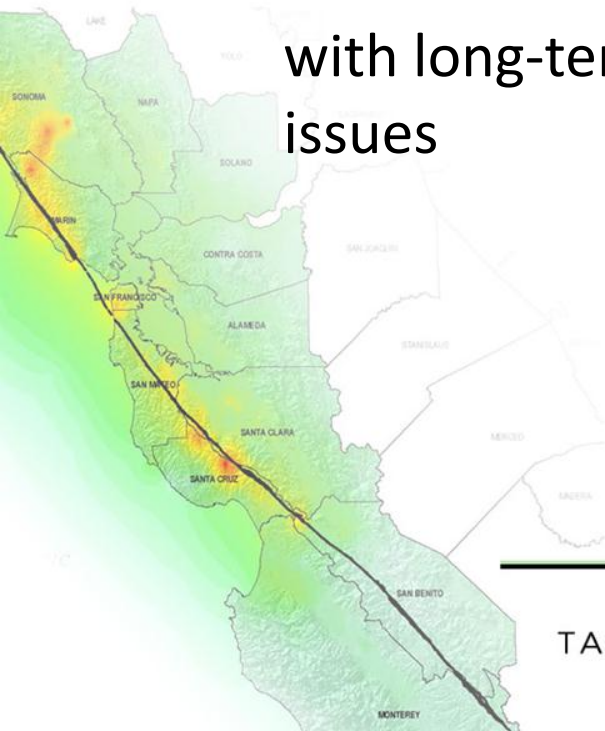


# Debris Removal/Management Plan

## Relationships Overview

RECP Subsidiary Plan:

- Describes operational concepts relating to recovery, identifies components of a recovery organization, and describes general responsibilities of the state, region, and other jurisdictions
- Identifies a Debris Management Working Group to assist with long-term debris management-related recovery issues



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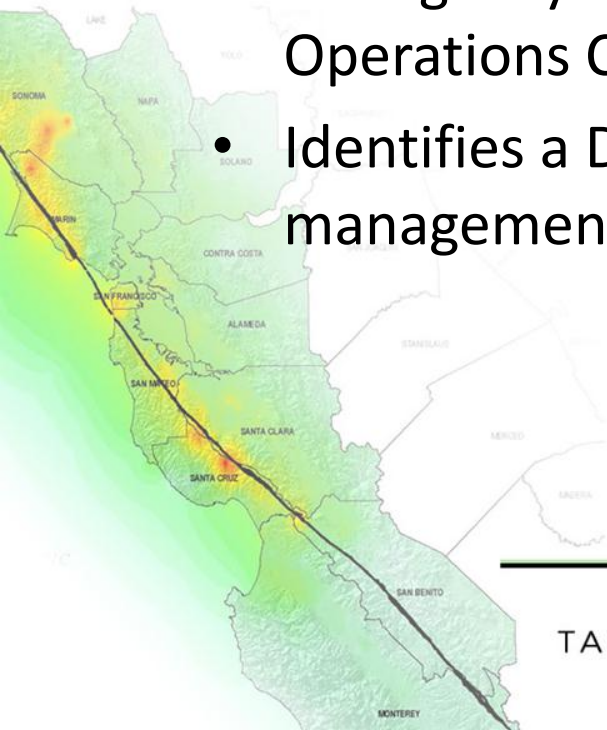


# Debris Removal/Management Plan

## Relationships Overview

Regional Catastrophic Earthquake Debris Removal Plan:

- A guide for debris removal operations occurring within the San Francisco Bay Area region after a catastrophic earthquake
- Provides debris management operational details for OA Emergency Operations Centers (EOC), REOC, and the State Operations Center (SOC) and Joint Field Office (JFO)
- Identifies a Debris Task Force to assist with debris management coordination and information issues



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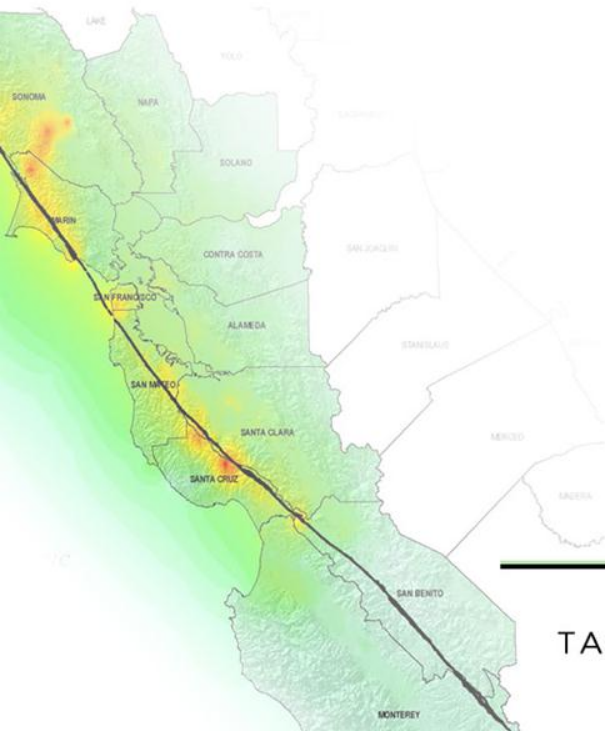


# Debris Removal/Management Plan

## Relationships Overview

Regional Catastrophic Earthquake Debris Removal Plan:

- An incident specific annex to the RECP and is consistent with it and the RECP Recovery Subsidiary Plan
- In the development of the Plan, concepts were integrated from the CONPLAN, RECP, and Federal and state guidance



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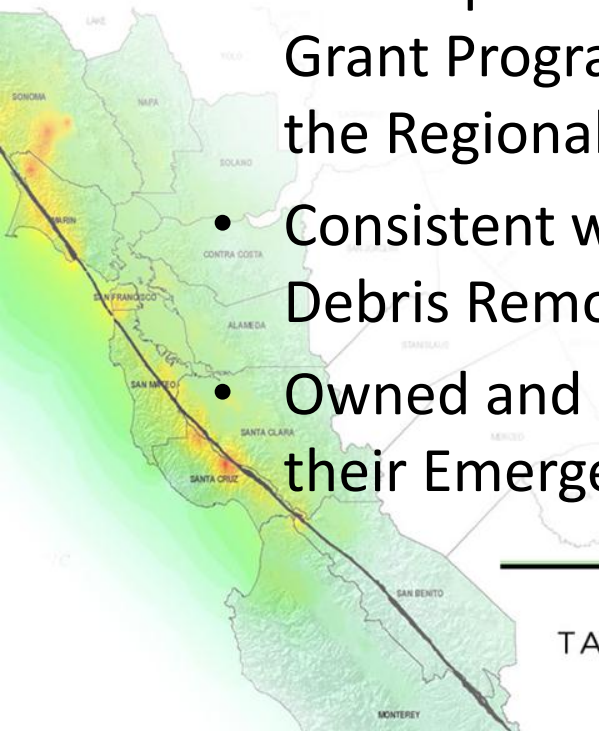


# Debris Removal/Management Plan

## Relationships Overview

Operational Area Catastrophic Earthquake Debris Removal Plans:

- Provides guidance for debris removal operations occurring within the Operational Area after a catastrophic earthquake
- Developed under the Regional Catastrophic Preparedness Grant Program as part of the same effort that developed the Regional Catastrophic Earthquake Debris Removal Plan
- Consistent with the Regional Catastrophic Earthquake Debris Removal Plan
- Owned and maintained by the OAs and are annexes to their Emergency Operations Plan (EOPs)



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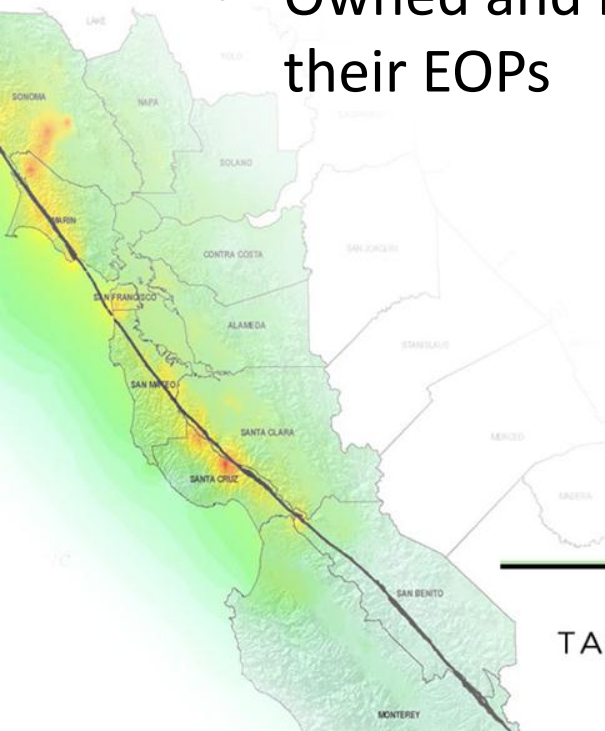


# Debris Removal/Management Plan

## Relationships Overview

Core City Catastrophic Earthquake Debris Removal Plans:

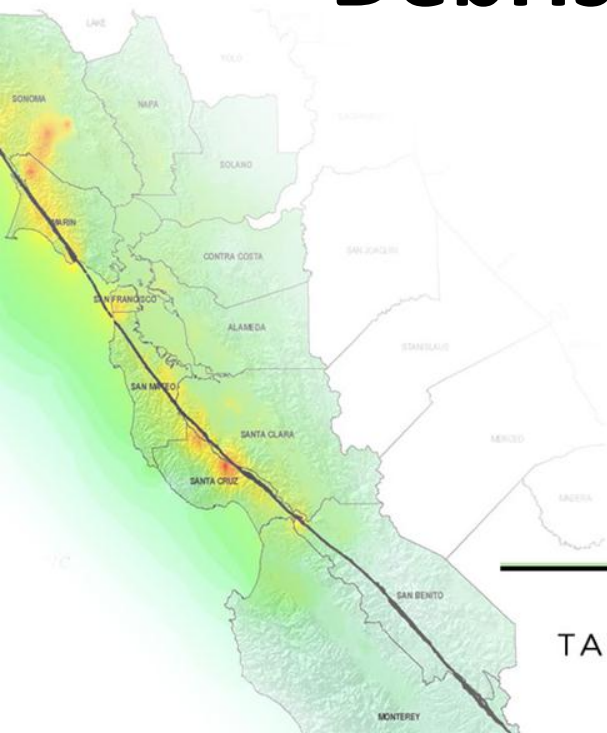
- Developed for the cities of Oakland and San Jose
- Special attention was given to the planning effort of Alameda and Santa Clara counties to promote consistency across those plans
- Owned and maintained by the cities and are annexes to their EOPs



TABLETOP EXERCISE



# Regional Catastrophic Earthquake Debris Removal Plan Overview



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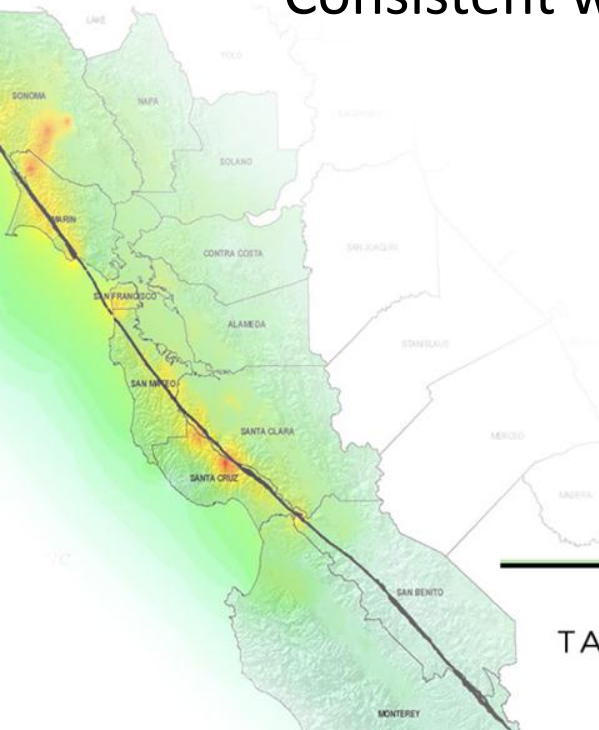




# Regional Catastrophic Debris Removal Plan Overview

## Introduction:

- A scenario-driven, function-specific operations plan that describes debris removal in the aftermath of a catastrophic earthquake in the Bay Area
- An annex to the RECP prepared by Cal OES
- Consistent with CONPLAN



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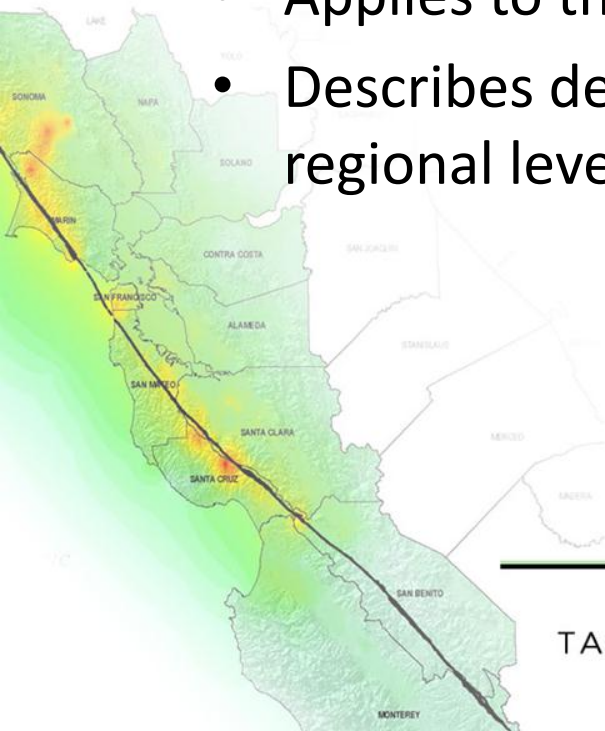




# Regional Catastrophic Debris Removal Plan Overview

## Introduction:

- Addresses the response to an **M 7.9** earthquake on the San Andreas Fault
- Applies to the response during the first 60 days after the earthquake
- Applies to the 12 counties in the Bay Area
- Describes debris removal operations applicable at the regional level



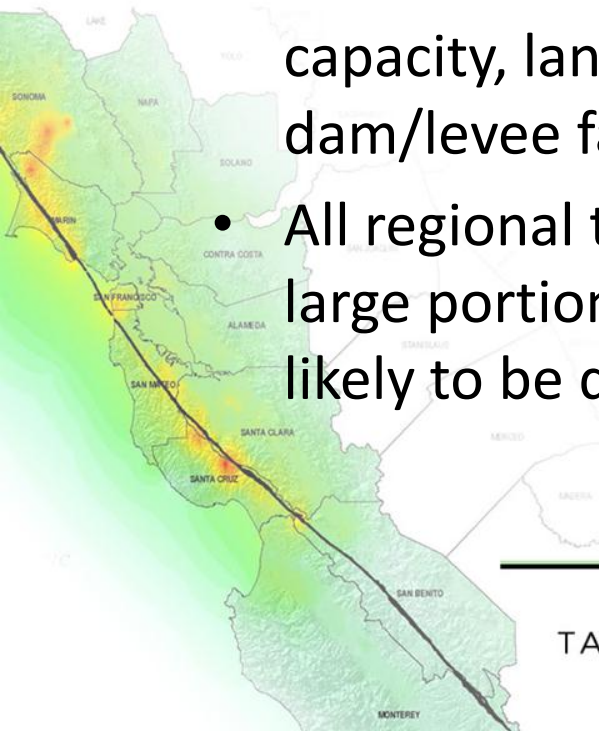
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# Regional Catastrophic Debris Removal Plan Overview

## Scenario Event:

- **M** 7.9 earthquake on the northern segment of the San Andreas Fault
- Threats and hazards from the earthquake include structural and nonstructural damage to buildings and infrastructure, fires, subsidence, loss of soil-bearing capacity, landslides, hazardous spills and releases, dam/levee failure resulting in flooding, and civil disorder
- All regional transportation networks will be affected — large portions of the transportation infrastructure are likely to be damaged or destroyed



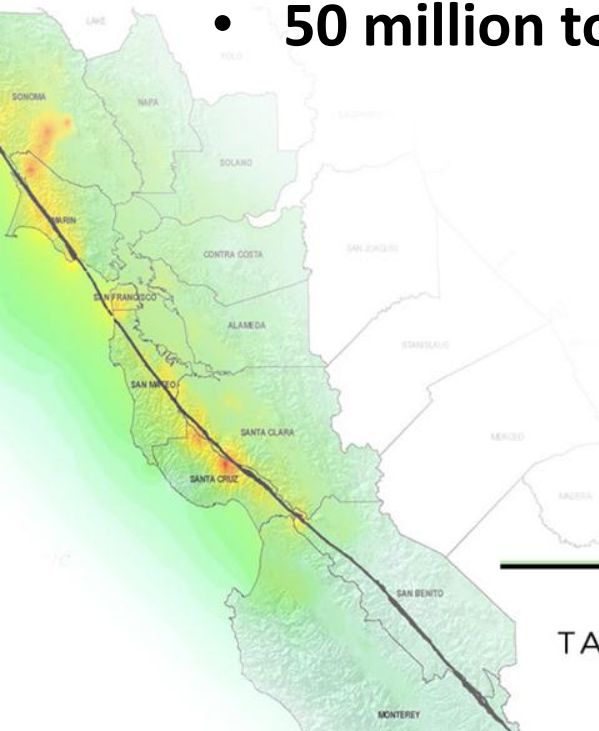
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# Regional Catastrophic Debris Removal Plan Overview

Scenario Event:

- 7,000 fatalities
- 300,000 people seeking shelter
- 1.8 million households without potable water
- 500,000 households without electricity
- **50 million tons of debris**



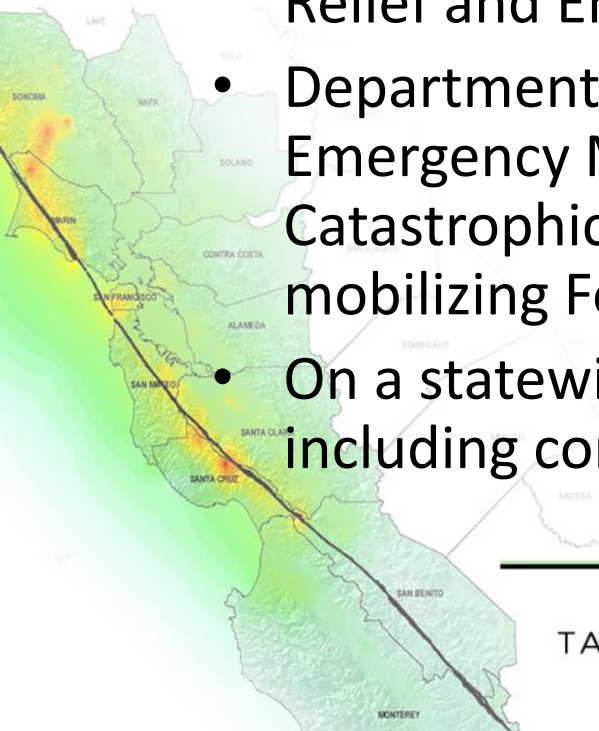
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# Regional Catastrophic Debris Removal Plan Overview

## General Planning Assumptions Highlights:

- Local governments proclaim a Local Emergency. The Governor of California proclaims a State of Emergency and requests that the President declare a disaster
- The President declares a Major Disaster, making Federal assistance available under the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988
- Department of Homeland Security (DHS) / Federal Emergency Management Agency (FEMA) implement the Catastrophic Incident Supplement to the NRF and begin mobilizing Federal resources
- On a statewide basis, all elements of SEMS are functional, including communications and mutual aid systems



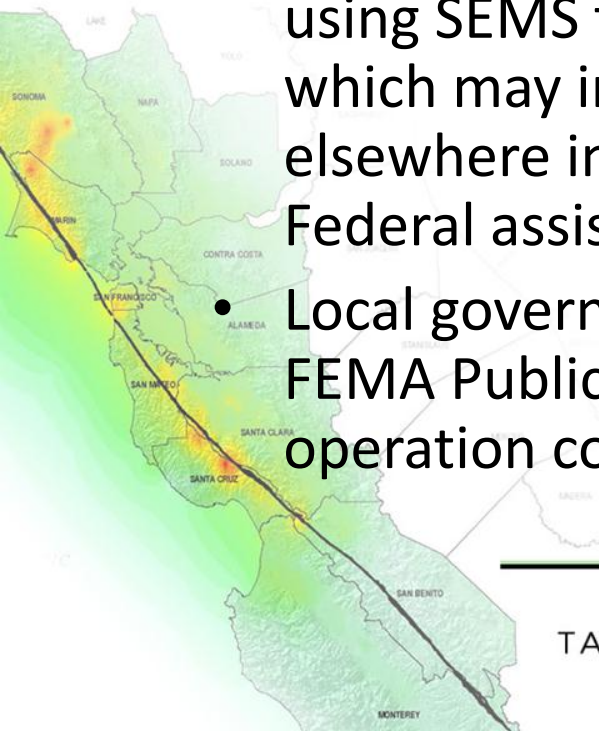
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# Regional Catastrophic Debris Removal Plan Overview

## Operational Assumptions Highlights:

- Local governments initially use their own resources and available private-sector contractors to clear debris
- Amount of debris exceeds the ability of local governments to clear debris, and out-of-region resources are required
- Local governments request assistance through Cal EMA using SEMS for debris clearance and removal operations, which may include State assistance, assistance from elsewhere in the State or from other States, and direct Federal assistance
- Local governments also request financial assistance for FEMA Public Assistance Program for debris management operation costs



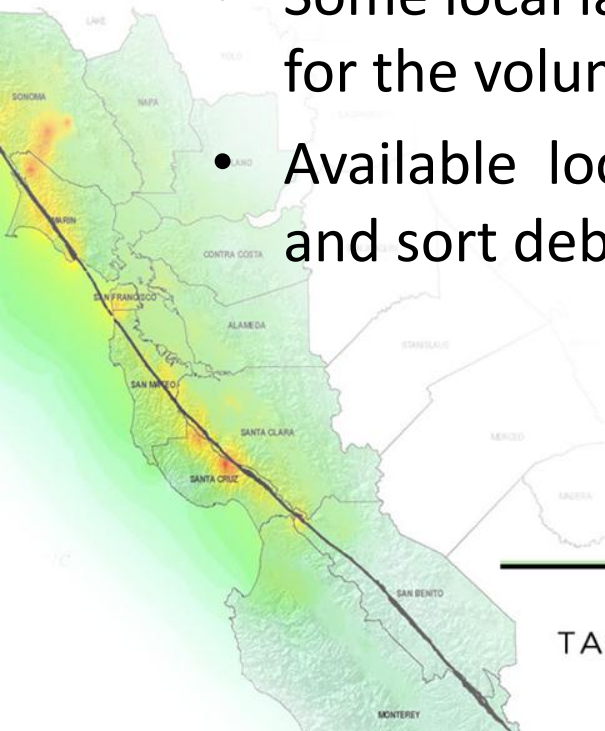
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# Regional Catastrophic Debris Removal Plan Overview

## Operational Assumptions Highlights:

- A high priority is placed on processing debris
- Existing local transfer/processing facilities are likely to have insufficient capacity to process the volume and types of debris
- Some local landfills are likely to have insufficient capacity for the volume of unrecyclable debris
- Available local open space areas used to temporarily store and sort debris are likely limited in certain cities/counties



TABLETOP EXERCISE





# Regional Catastrophic Debris Removal Plan Overview

Debris Amount Assumptions:

**Table 1.** Tonnage and volume of debris generated by the earthquake.

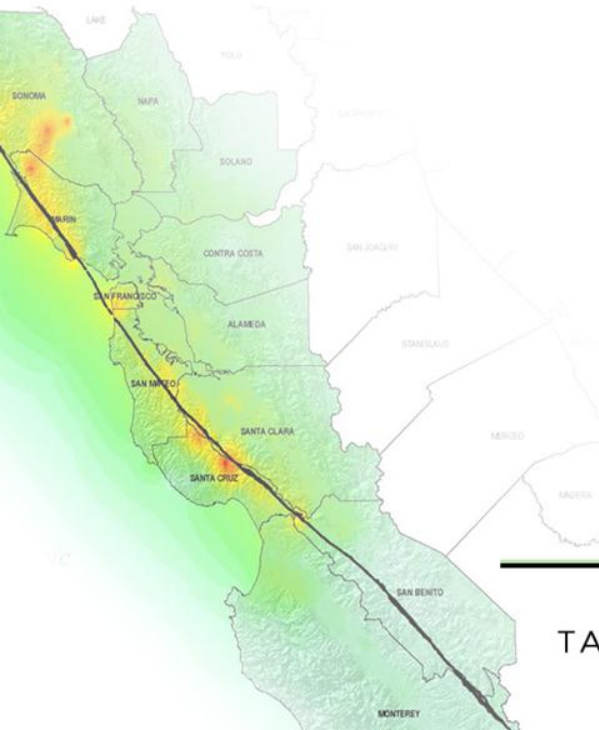


Table 1. Tonnage and volume of debris generated by the earthquake.

County/City	Tonnage (in thousands of tons)			Volume (in thousands of cubic yards)		
	Wood/ Brick/Other	Concrete/ Steel	Total	Wood/ Brick/Other	Concrete/ Steel	Total
Alameda	3,600	7,300	10,900	7,100	7,300	14,400
Contra Costa	700	1,100	1,800	1,300	1,100	2,400
Marin	400	900	1,300	900	900	1,800
Monterey	200	300	500	400	300	700
Napa	200	400	600	400	400	800
San Benito	30	40	70	100	40	140
San Francisco	3,800	9,200	13,000	7,700	9,200	16,900
San Mateo	2,000	4,400	6,400	3,900	4,400	8,300
Santa Clara	3,600	8,100	11,700	7,100	8,100	15,200
Santa Cruz	300	500	800	600	500	1,100
Solano	200	300	500	300	300	600
Sonoma	800	1,700	2,500	1,700	1,700	3,400
<b>Regional Totals</b>	<b>15,830</b>	<b>34,240</b>	<b>50,070</b>	<b>31,500</b>	<b>34,240</b>	<b>65,740</b>
City of Oakland	1,100	2,400	3,500	2,200	2,400	4,600
City of San Jose	1,900	4,100	6,000	3,800	4,100	7,900

Source: URS HAZUS analysis (2009); conversion rates from the U.S. Army Corps of Engineers. Values converted from thousands of tons. For wood/brick/other, the conversion is 1 ton = 2 cubic yards; for concrete/steel, the conversion is 1 ton = 1 cubic yard.

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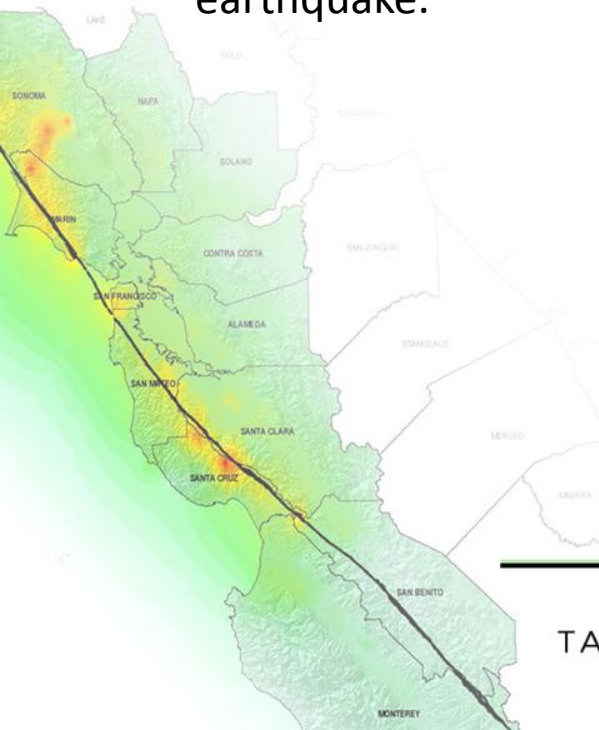




# Regional Catastrophic Debris Removal Plan Overview

## Debris Amount Assumptions:

**Table 2.** Number of buildings in the 12-county Bay Area region that may require demolition after the earthquake.

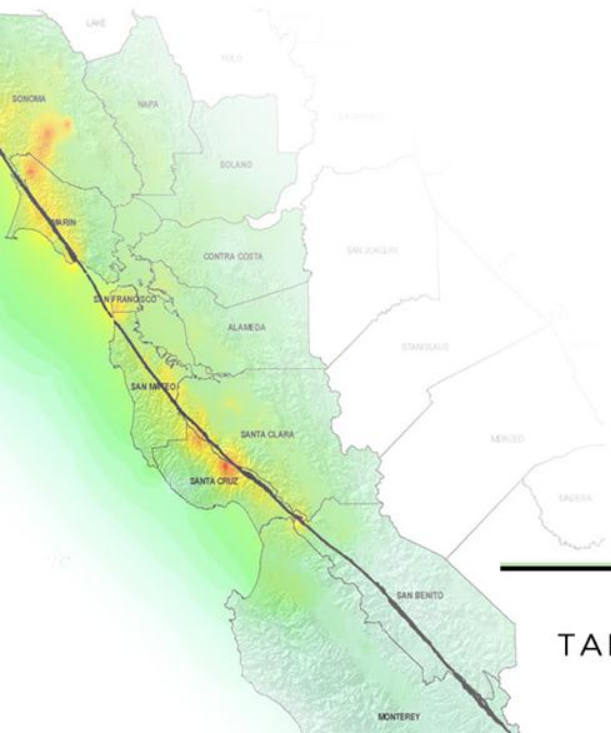


**Table 2.** Number of buildings in the 12-county Bay Area region that may require demolition after the earthquake.

County/City	Number of Buildings	
	Extensive Damage	Complete Damage
Alameda	11,300	36,100
Contra Costa	1,400	8,400
Marin	1,400	4,500
Monterey	1,300	100
Napa	1,200	1,600
San Benito	300	20
San Francisco	18,600	16,300
San Mateo	8,200	16,600
Santa Clara	14,700	45,500
Santa Cruz	4,100	600
Solano	400	2,400
Sonoma	6,600	7,700
<b>Regional Totals</b>	<b>69,500</b>	<b>139,800</b>
City of Oakland	4,900	7,100
City of San Jose	8,100	26,900

Source: URS HAZUS analysis (2009)

# Module 1: Debris Task Force



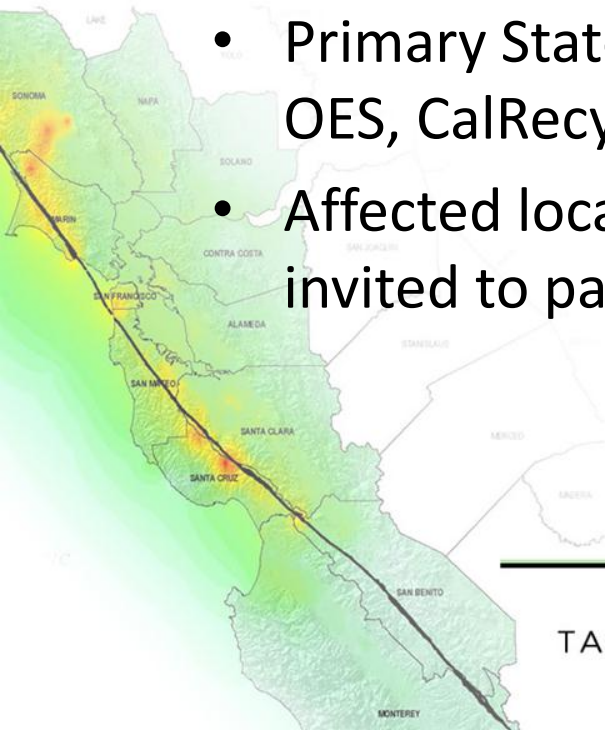
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# Module 1: Debris Task Force

## Regional Catastrophic Debris Removal Plan:

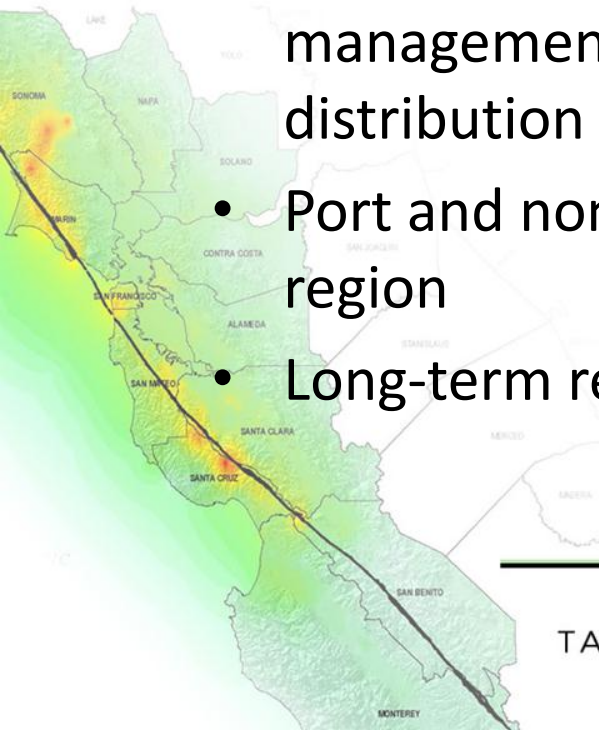
- Identifies Cal OES-led Debris Task Force as the main group for information sharing/gathering and for some coordination efforts at the regional level
- Operates from the SOC or JFO
- Primary State agencies and departments: including Cal OES, CalRecycle, Caltrans, & Cal EPA
- Affected local governments, OAs, and the REOC will be invited to participate on these calls



# Module 1: Debris Task Force

Cal-OES Debris Task Force Conference Calls:

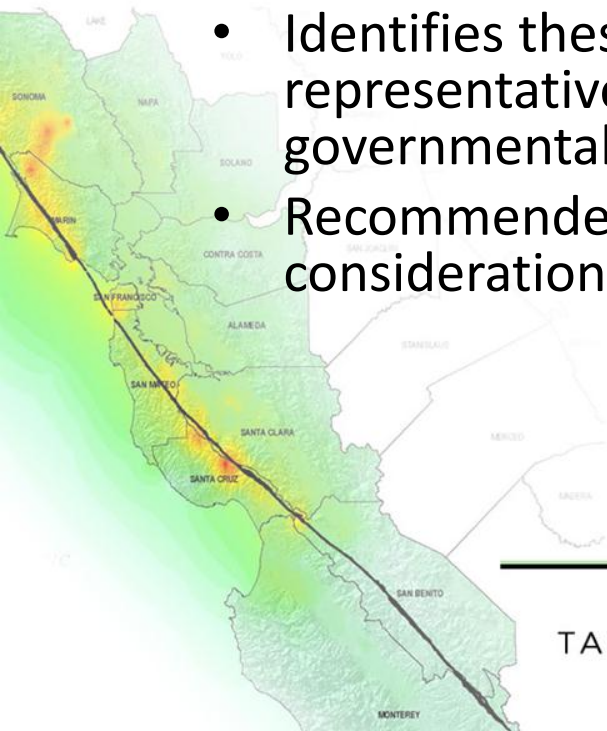
- Federal Highway Administration and FEMA Public Assistance Program debris clearance requirements
- FEMA Public Assistance Program requirements
- U.S. Army Corps of Engineers (USACE)-operated debris management sites; CalRecycle's recommended distribution of debris
- Port and non-passenger rail facilities to take debris out of region
- Long-term recovery issues



# Module 1: Debris Task Force

## RECP:

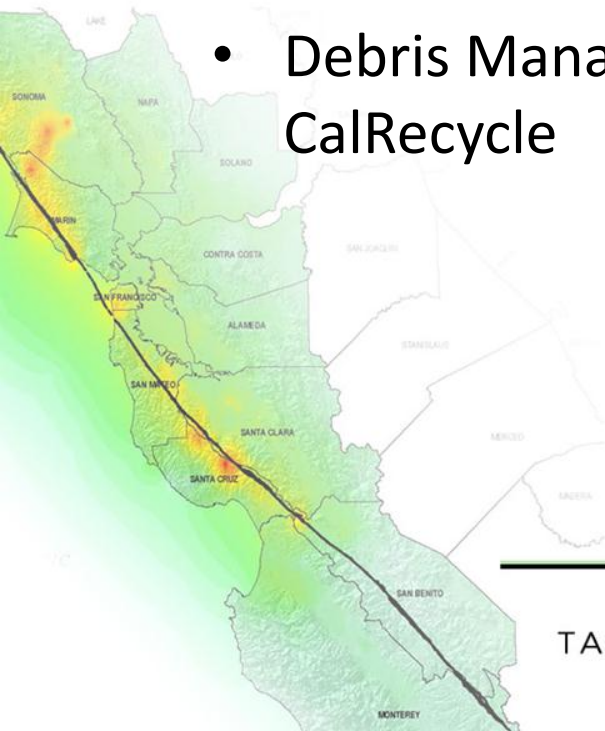
- Discusses the use of a separate Cal EMA-led task force that may also be used for information sharing and coordination efforts
- Authorizes the REOC Director to convene task forces to address complex, multidisciplinary issues t (debris management is not specifically called out)
- Identifies these task forces as being composed of representatives from local, State, Federal, and non-governmental organizations, and subject matter experts
- Recommended actions by a task force will be shared for consideration with the REOC Director or the RCG



# Module 1: Debris Task Force

RECP Regional Recovery Subsidiary Plan:

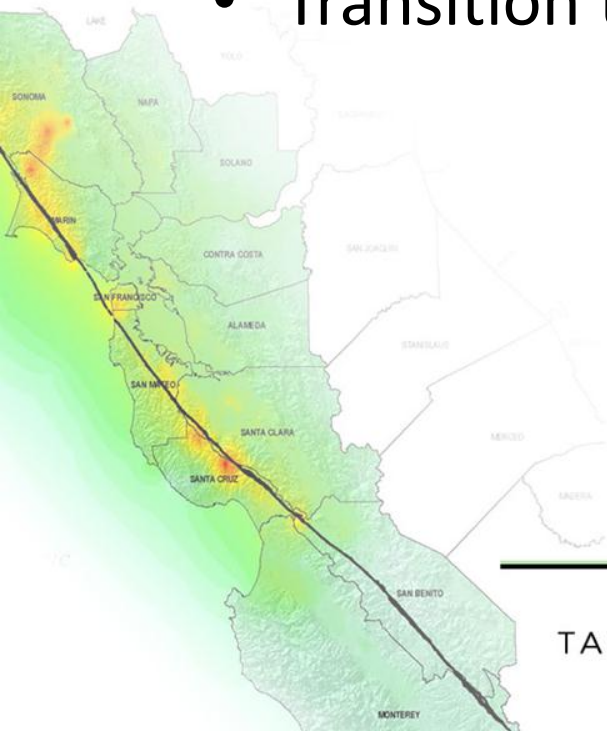
- Discusses the use of a Regional Recovery Task Force (led by a Governor-appointed chairperson) to establish a Debris Management Working Group to identify, prioritize, and addresses the short- and long-term debris recovery operations related to debris removal
- Debris Management Working Group may be chaired by CalRecycle





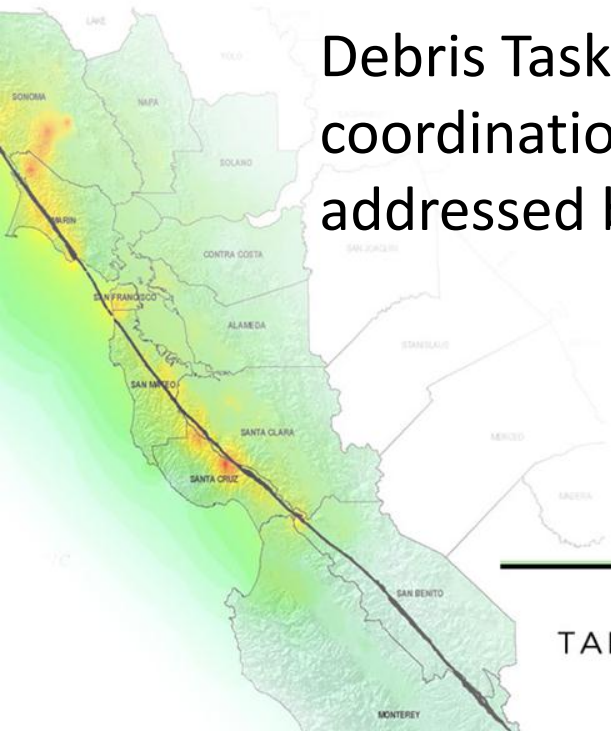
# Module 1: Key Issues

- Multiple debris removal coordination groups
- Participants
- Roles and responsibilities
- Protocols
- Transition to long term recovery



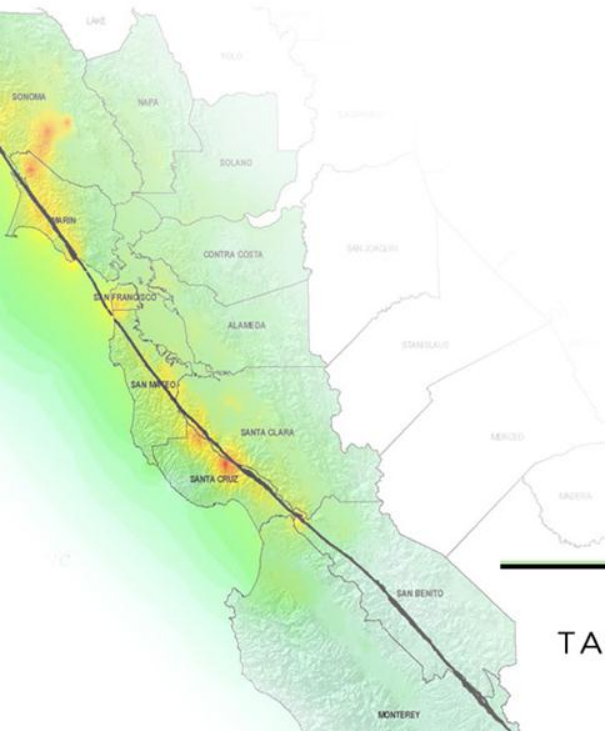
# Module 1: Discussion

1. Should the Debris Task Force be organized/directed from the SOC/JFO, or should task force operations be organized at the regional level at the REOC?
2. Who should lead and who should participate on the Debris Task Force? Should participants be pre-identified?
3. What should be the roles and responsibilities of the Debris Task Force? Information sharing? Resource coordination? Should major issues that need to be addressed by the Debris Task Force be pre-identified?



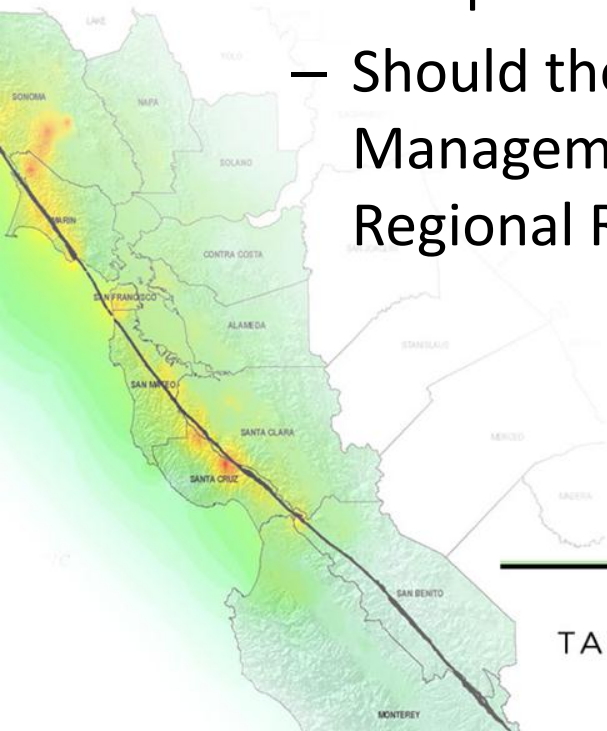
# Module 1: Discussion

4. How/when should the Debris Task Force convene?
5. Should standard procedures be developed for Debris Task Force conference calls and included as an appendix of the Regional Catastrophic Debris Removal Plan?

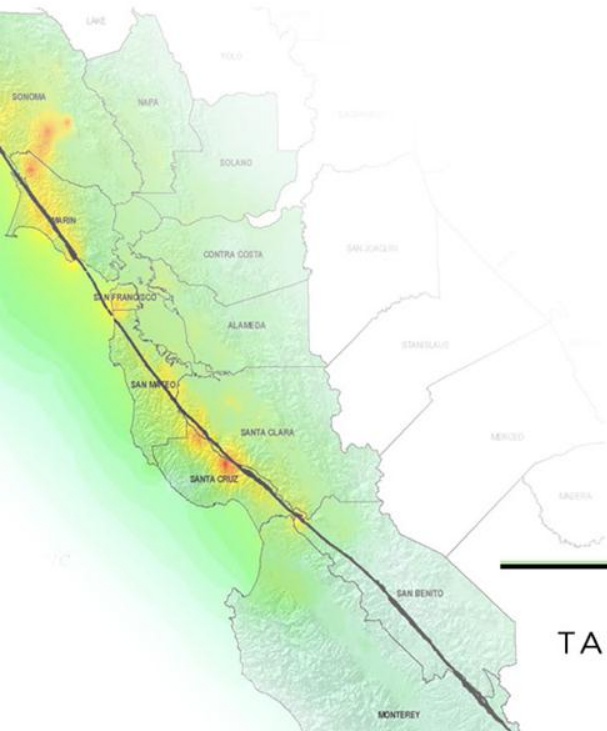


# Module 1: Discussion

6. In what capacity should the Debris Task Force convene for/during long-term recovery operations?
- Should the Debris Task Force deactivate after EOC operations end?
  - Should the Debris Task Force continue to meet independently and if so, how?
  - Should the Debris Task Force transition into the Debris Management Working Group and report to the Regional Recovery Task Force?



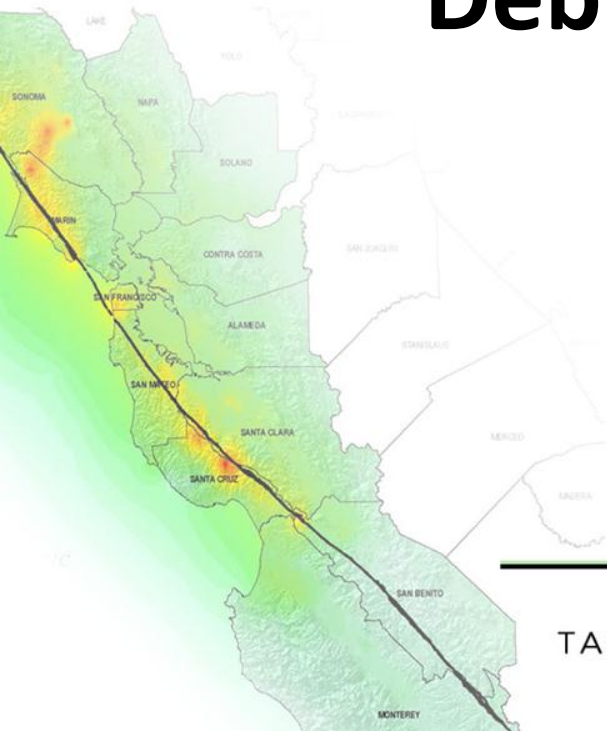
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TABLETOP EXERCISE



# Module 2: Debris Clearance Priorities



TABLETOP EXERCISE

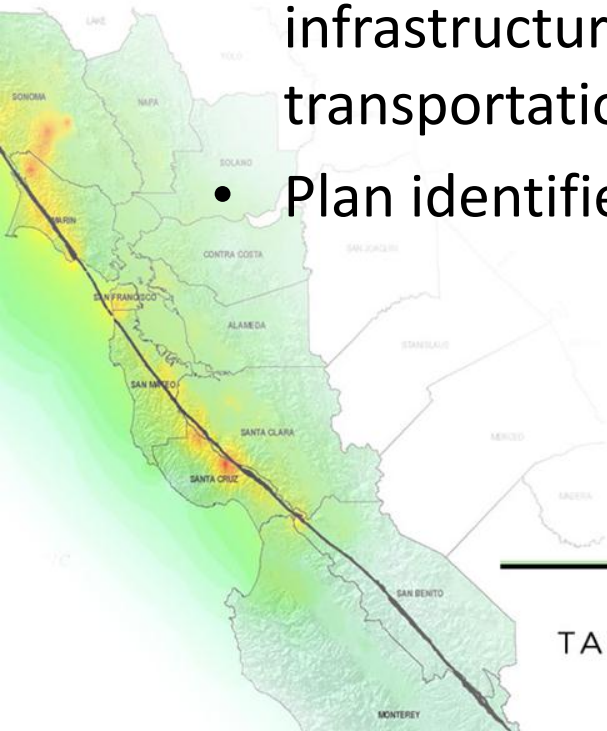




# Module 2: Debris Clearance Priorities

## Regional Catastrophic Debris Removal Plan:

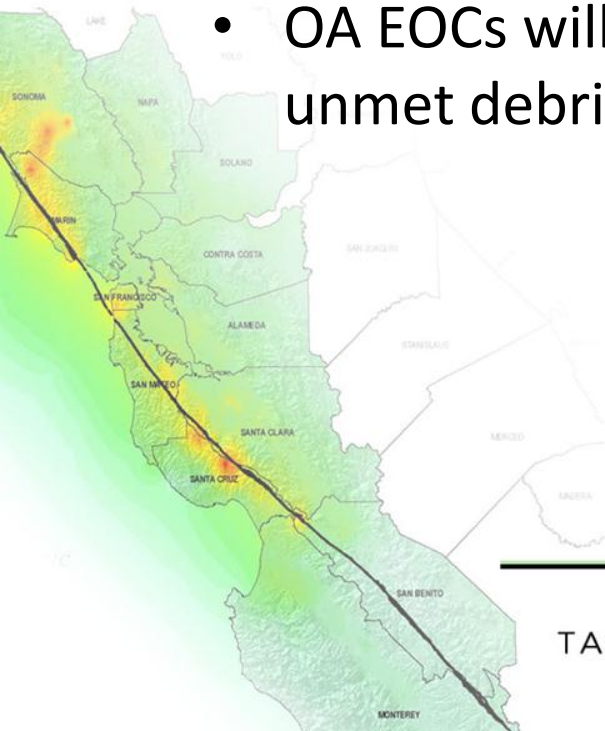
- Priorities will first be to eliminate life-safety threats and to provide access to critical facilities that are safe for occupancy
- Caltrans Lifeline routes, including include the major infrastructure of the State highway system, local priority transportation routes, and critical facilities
- Plan identifies the routes and facilities listed above



# Module 2: Debris Clearance Priorities

## Regional Catastrophic Debris Removal Plan:

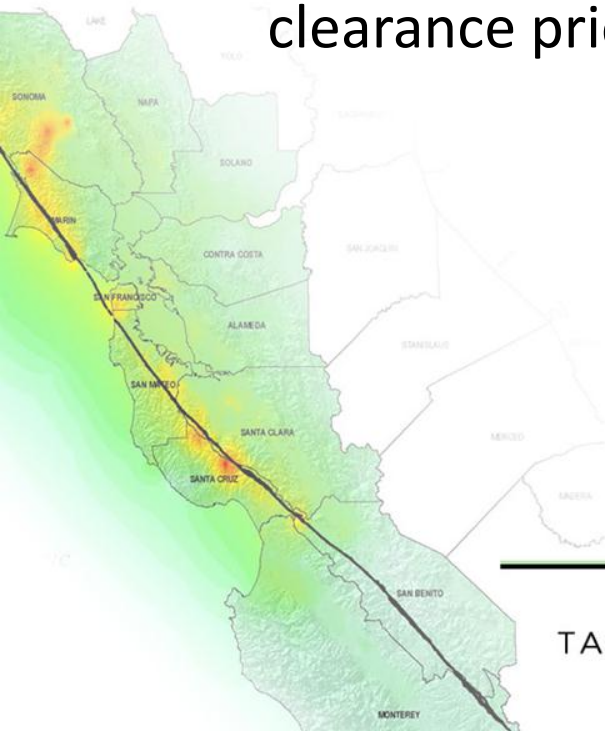
- OA EOCs will coordinate debris clearance priorities with local governments to ensure that multi-jurisdictional local priority transportation routes and critical facilities needed for the region are cleared simultaneously
- OA EOCs will participate in RCG to identify and resolve unmet debris clearance priorities



# Module 2: Debris Clearance Priorities

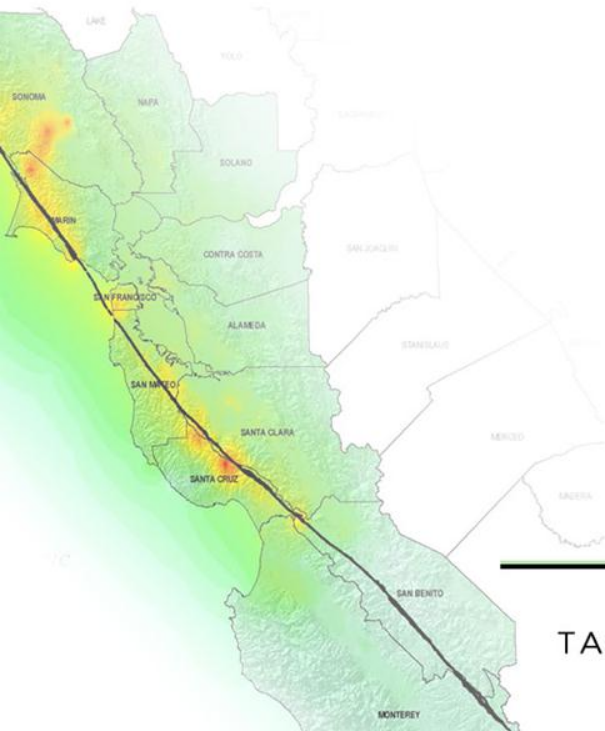
Regional Catastrophic Debris Removal Plan:

- REOC Director will utilize the RCG
- RCG will gather input from California Highway Patrol (CHP) and Caltrans representatives in the REOC, receive input from Debris Task Force to determine regional debris clearance priorities



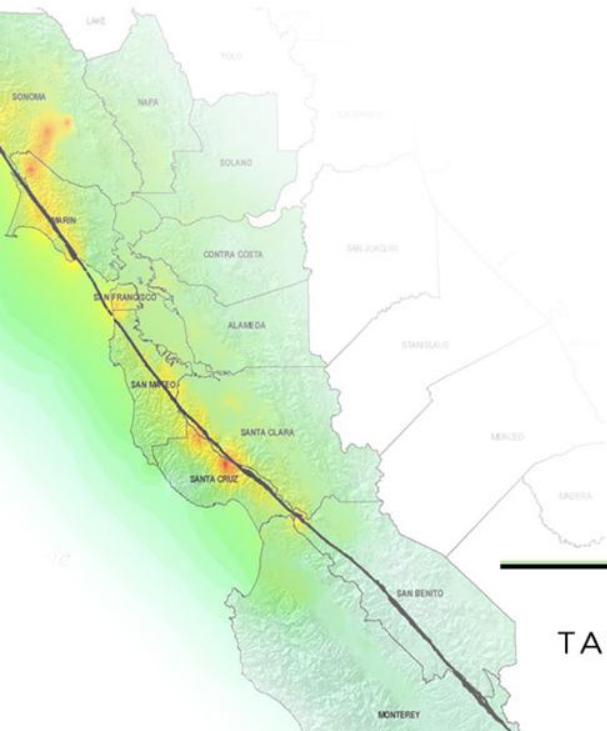
# Module 2: Debris Clearance Priorities

- Neither the RECP or the Regional Catastrophic Earthquake Debris Removal Plan describes in further detail how the RCG and/or Debris Task Force will coordinate debris clearance priorities at the regional level



# Module 2: Key Issues

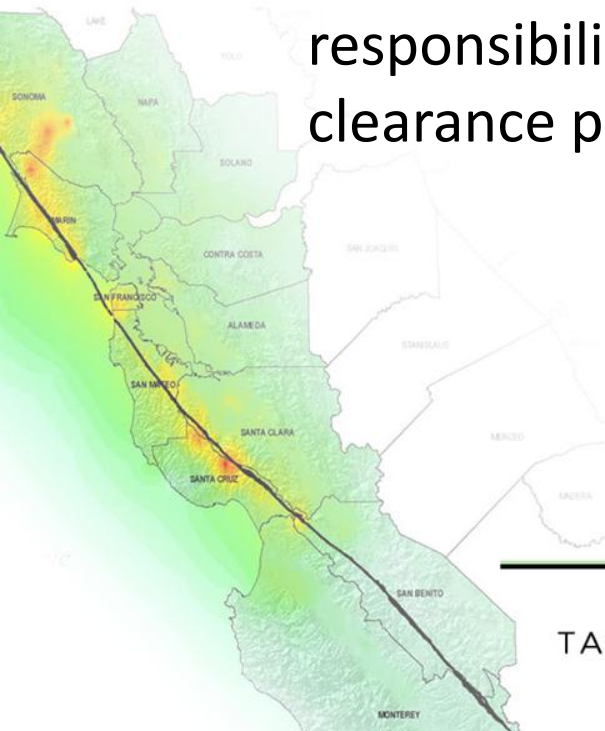
- Role of the RCG
- Role of the Debris Task Force
- Regional Coordination Efforts



TABLETOP EXERCISE

# Module 2: Discussion

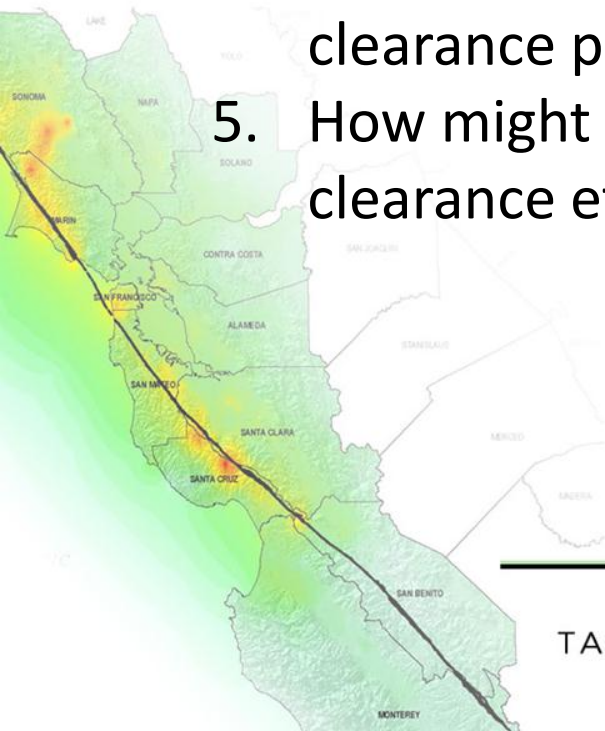
1. What should be the role of the RCG? Is it realistic to think that the RCG can set and coordinate debris clearance priorities within event occurrence (E) to E+72 hours of the event?
2. Should the Debris Task Force be tasked with more responsibility in identifying and coordinating debris clearance priorities?



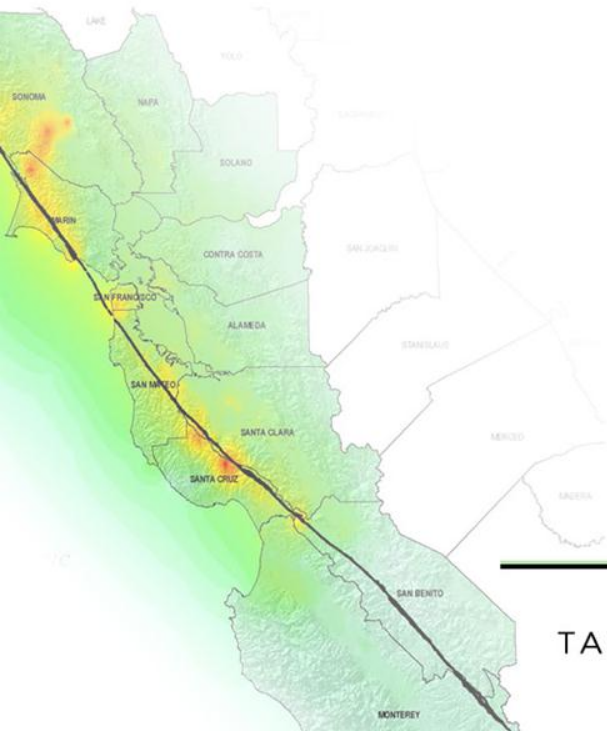


# Module 2: Discussion

3. Would it be useful to pre-identify regionally significant debris clearance priority routes where debris clearance operations would involve more than one entity? If so, how should this be done?
4. How will the RCG/Debris Task Force resolve unmet debris clearance priorities at the Operational Area level?
5. How might regional coordination assist with local debris clearance efforts?



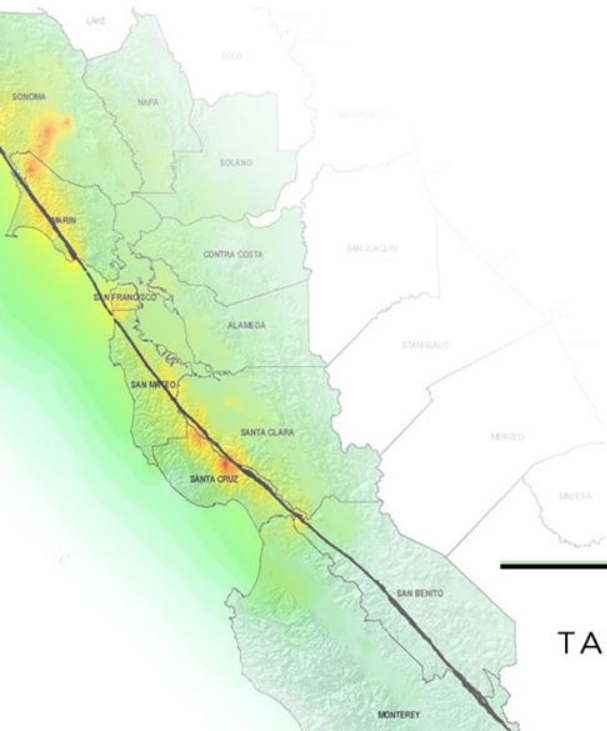
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TABLETOP EXERCISE



# Module 3: Staging and Disposal



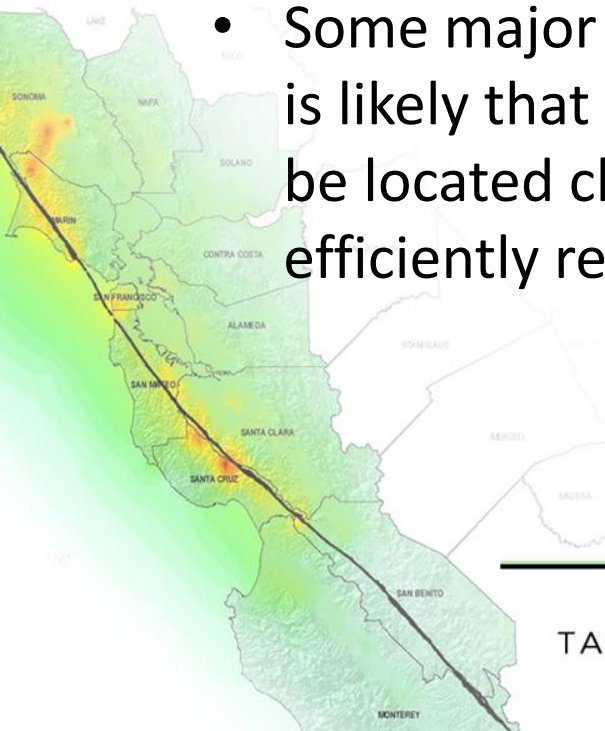
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# Module 3: Staging and Disposal

## Regional Catastrophic Earthquake Removal Plan:

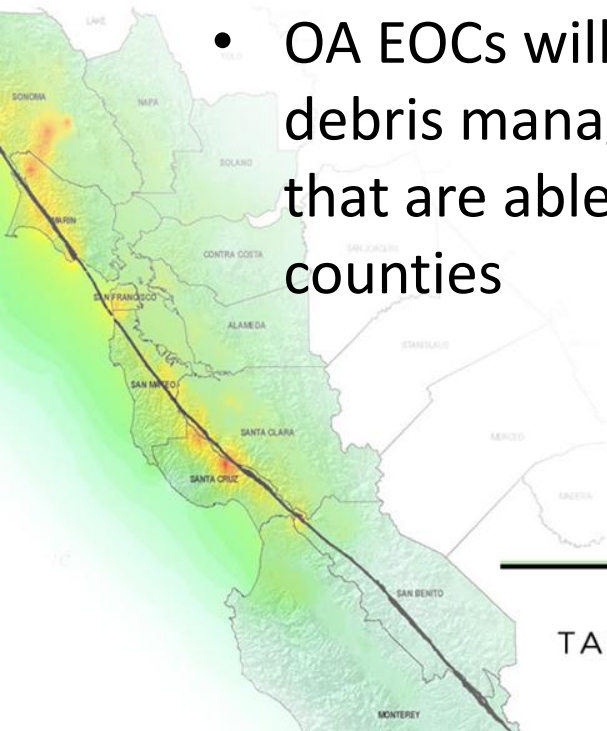
- Specific debris management sites have not been identified due to the environmental review process required under California Environmental Quality Act (CEQA)
- Some major rail lines and ports have been identified as it is likely that large, regional debris management sites will be located close to major transportation outlets to efficiently remove debris from the region



# Module 3: Staging and Disposal

## Regional Catastrophic Debris Removal Plan:

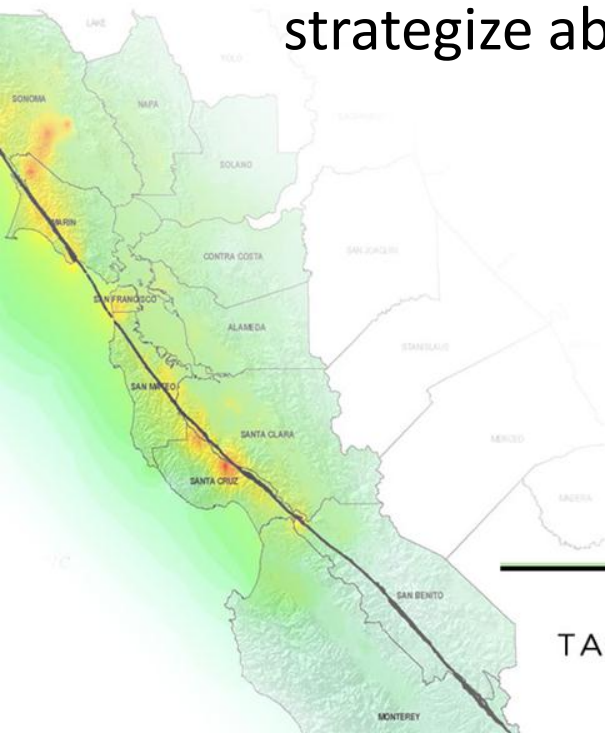
- OA EOCs will contact their Local Enforcement Agency and/or CalRecycle about solid waste closed landfills
- OA EOCs will contact port and non-passenger rail facility owners regarding open space
- OA EOCs will notify the REOC of any potential large debris management sites that have been identified and that are able and willing to accept debris from other counties



# Module 3: Staging and Disposal

## Regional Catastrophic Debris Removal Plan:

- REOC will notify other OAs and the Debris Task Force of such potential sites
- Debris Task Force will hold conference calls with the affected local governments, OAs, and the REOC to strategize about site use and site operation

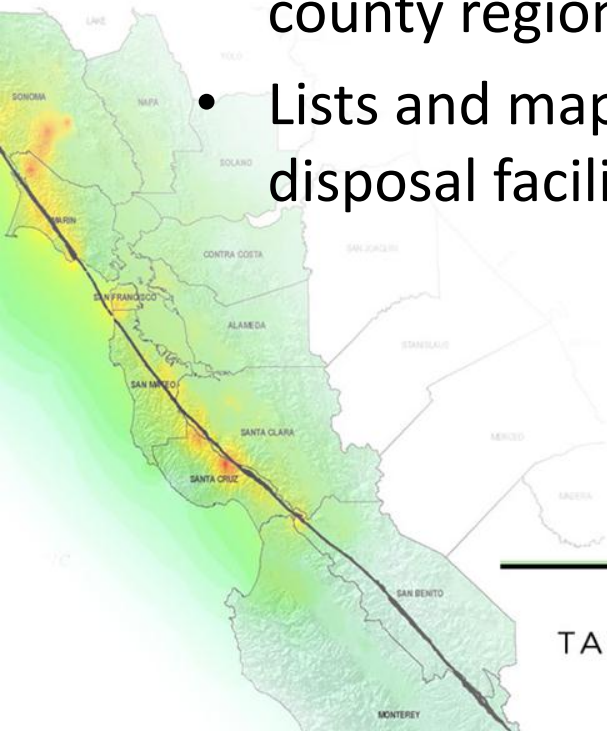




# Module 3: Staging and Disposal

## Regional Catastrophic Debris Removal Plan:

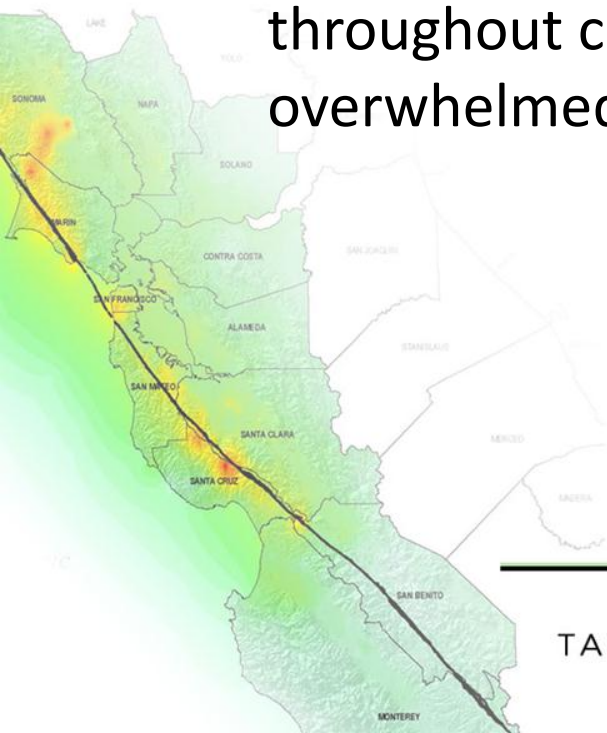
- Lists and maps all permitted, active large-volume transfer/processing facilities and all permitted active, solid waste landfills with a maximum throughput of 1,500 tons per day or greater within a 100-mile radius of the 12-county region
- Lists and maps out-of-region transfer/processing and disposal facilities accessible by rail or port



# Module 3: Staging and Disposal

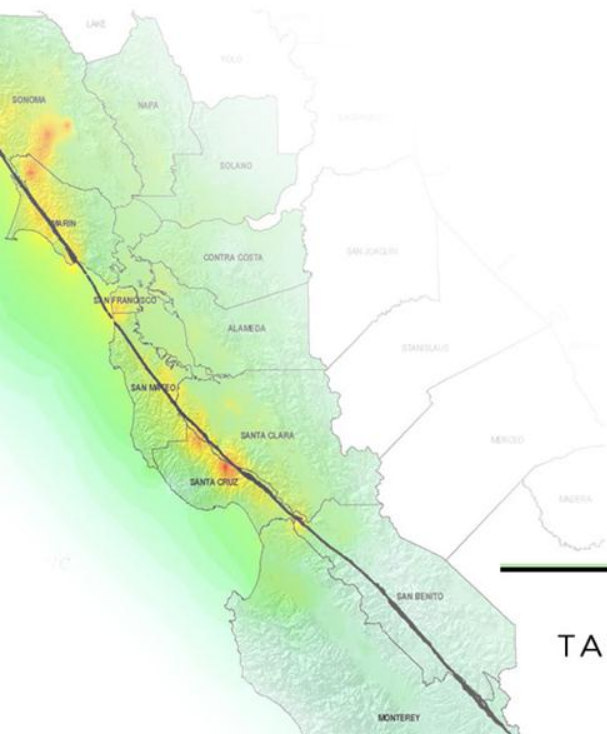
## Regional Catastrophic Debris Removal Plan:

- Plan does not describe which facilities will be used and by whom
- Plan states only that CalRecycle through the Debris Task Force will recommend the equitable distribution of debris throughout counties in the region so that no one facility is overwhelmed



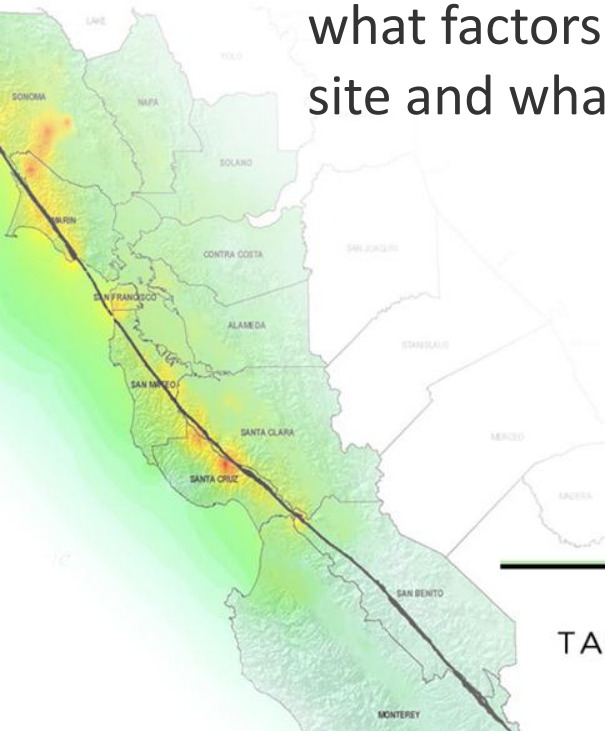
# Module 3: Key Issues

- CEQA requirements
- Equitable distribution strategy
- Feasibility of using out-of-state processing and landfill facilities



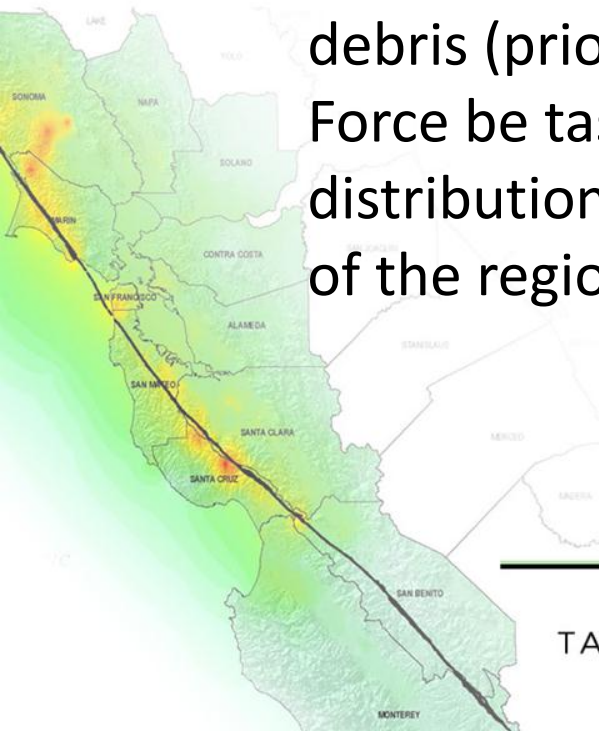
# Module 3: Discussion

1. How should the Regional Catastrophic Earthquake Debris Removal Plan address specific debris management sites, given CEQA requirements?
2. If the debris management sites can be included in an appendix of the Regional Catastrophic Earthquake Debris Removal Plan, what factors should be considered in the identification of each site and what information should be listed for each site?

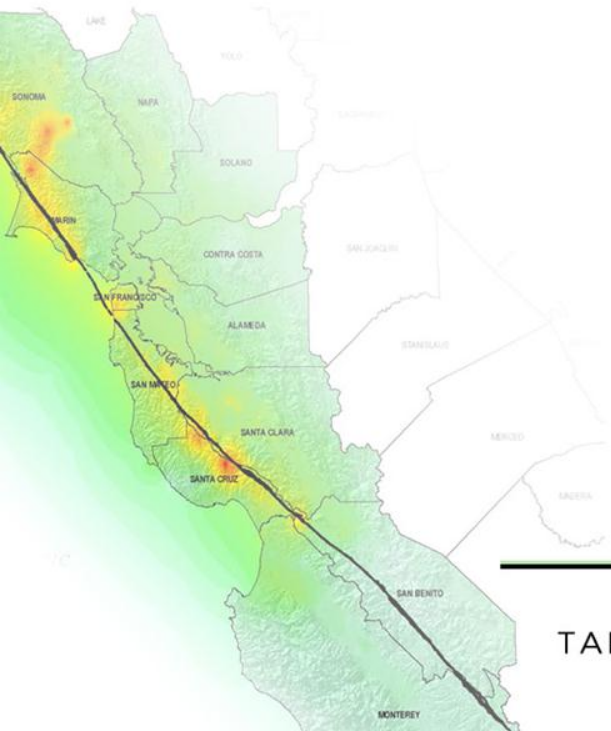


# Module 3: Discussion

3. Should the Debris Task Force be tasked with determining the number of, and location of, regional debris management sites and overall coordination efforts for these sites? If so, how should this be done?
4. Is there a way to pre-identify the equitable distribution of debris (prior to a disaster)? If not, should the Debris Task Force be tasked with determining the equitable distribution of debris within the region, as well as outside of the region? If so, how should this be done?



# Hot Wash / Closing Comments



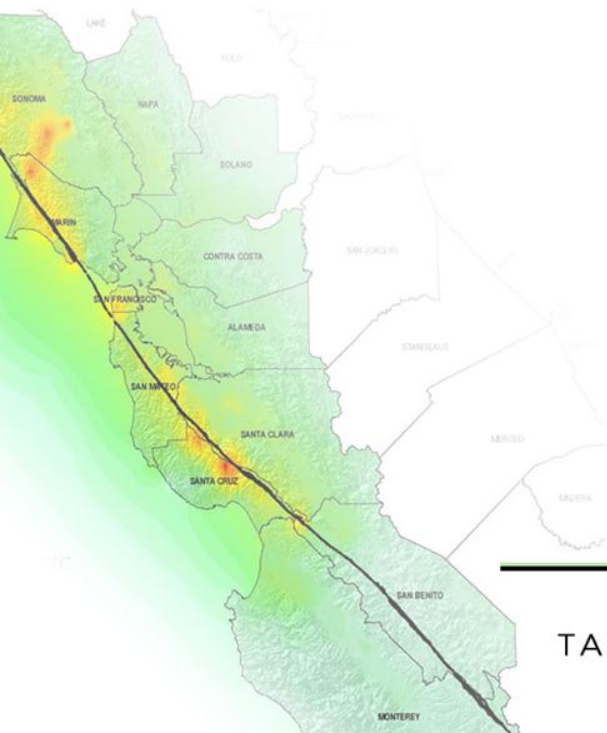
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# Hot Wash

- Strengths ?
- Areas for Improvement ?



TABLETOP EXERCISE

# Closing Comments

- Lani Kent
  - Project Manager
  - Bay Area UASI
- Paul Jacks and Anna Davis
  - Debris SMEs
  - URS Corporation

