



**[JURISDICTION] CATASTROPHIC
EARTHQUAKE DEBRIS REMOVAL
CONCEPT OF OPERATIONS
WORKSHOP**

[DATE]

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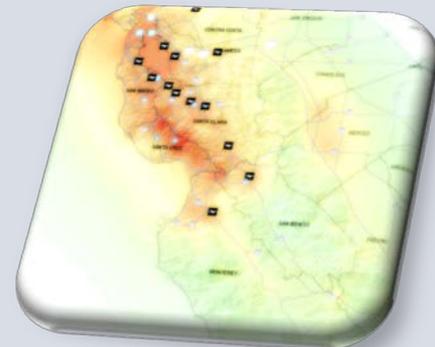


OPENING, INTRODUCTIONS, & OVERVIEW

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WELCOME AND HOUSEKEEPING

- Sign In, Workshop Materials
- Restrooms
- Silence cell phones
- Emergencies
- Breaks



INTRODUCTIONS

- Facilitators
- Participants



WORKSHOP SCHEDULE

[Date]

8:30 – 9:00	Registration
9:00 – 9:15	Opening and Introductions
9:15 – 10:00	Module 1: Plan Overview
10:00 – 11:30	Module 2: Objectives 1 to 4
10:00 – 10:25	Objective 1: Situational Awareness and Priorities
10:25 – 10:45	Objective 2: Debris Clearance
10:45 – 11:10	Objective 3: Building and Infrastructure Assessments
11:10 – 11:30	Objective 4: Staging, Processing, and Disposal of Debris
11:30 – 12:00	Working Lunch
12:00 – 1:00	Module 3: Objectives 5 to 7
12:00 – 12:20	Objective 5: Debris Removal
12:20 – 12:40	Objective 6: Demolition of Unsafe Buildings
12:40 – 1:00	Objective 7: Long-Term Recovery
1:00 – 1:30	Module 4: Review and Findings
1:30 – 1:45	Participant Feedback



WORKSHOP MANUAL

[insert image of Workshop Manual
Cover]



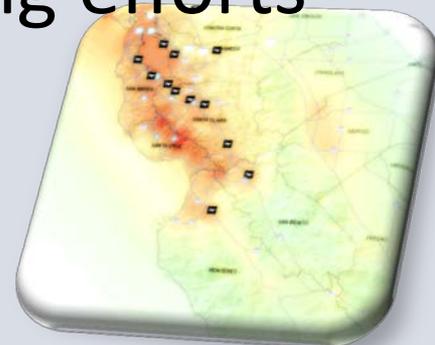
WORKSHOP PURPOSE

- Conduct a systematic review of the [Jurisdiction] Catastrophic Earthquake Debris Removal Plan .



WORKSHOP PURPOSE (CONT.)

- To familiarize workshop participants with critical elements discussed in the [Jurisdiction] Debris Removal Plan
- To review and/or evaluate critical elements and concepts presented in the Plan
- To identify gaps and areas for improvement for Plan revisions and future planning efforts



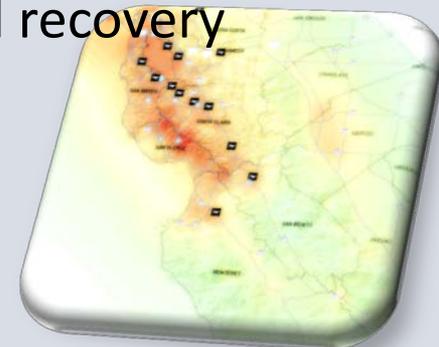
WORKSHOP OBJECTIVES

1. Evaluate the tasks identified for the development of situational awareness and priority operations.
2. Evaluate the tasks identified for debris clearance operations and discuss Public Assistance Program eligibility requirements for debris clearance operations.
3. Evaluate the tasks identified for the assessment of buildings and infrastructure and discuss Public Assistance Program eligibility requirements for the assessment of buildings and infrastructure.
4. Evaluate the tasks identified for the staging, processing, and disposal of debris and discuss Public Assistance Program eligibility requirements for the staging, processing, and disposal of debris.



WORKSHOP OBJECTIVES (CONT.)

5. Evaluate the tasks identified for debris removal operations and discuss Public Assistance Program eligibility requirements for debris removal operations.
6. Evaluate the tasks identified for the demolition of unsafe buildings and infrastructure and discuss Public Assistance Program eligibility requirements for the demolition of unsafe buildings and infrastructure.
7. Evaluate the tasks identified for long-term debris removal recovery operations and discuss Public Assistance Program funding requirements for long-term debris removal recovery operations.



WORKSHOP STRUCTURE

- Workshop will be an interactive, facilitated discussion, organized by modules
- Modules will not be presented chronologically to mirror the scenario event; rather, they will support objectives formulated to verify accuracy and consistency of the Plan and the operational elements necessary to carry out debris removal
- Participants will be introduced to Objectives and Discussion Points that support those objectives and will be asked to respond to facilitated questions



WORKSHOP GUIDELINES

- Primary goal of the workshop forum is to ensure that the coordination, resource-requesting and decision-making processes are accurately described
- Emphasis is on identifying potential inaccuracies or gaps and resolving them through discussion
- Developing solutions should be the focus
- Participation based on knowledge of existing plans and capabilities, and insights is encouraged



WORKSHOP GUIDELINES (CONT.)

- Decisions are not precedent-setting; the workshop is an opportunity to present and discuss multiple options and possible solutions
- Support from other responders and agencies is assumed
- Scenario, objectives, and assumptions serve as the basis for discussion
- Goal is to review elements of the plans, not to validate the scenario or the HAZUS estimates





MODULE 1: OVERVIEW OF THE [**JURISDICTION**] CATASTROPHIC EARTHQUAKE DEBRIS REMOVAL CONCEPT OF OPERATIONS

[Jurisdiction
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PLAN OVERVIEW

- The Plan addresses:
 - Development of situational awareness and priorities
 - Debris clearance
 - Assessment of buildings and infrastructure
 - Staging, processing, and disposal of debris
 - Debris removal
 - Demolition of unsafe buildings and infrastructure

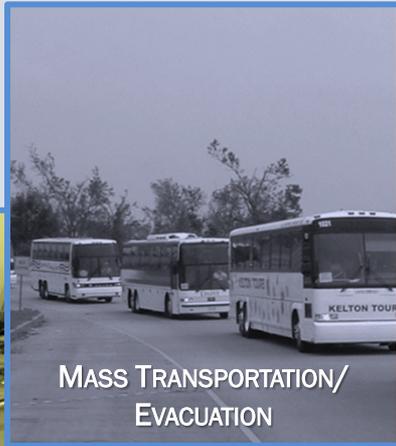
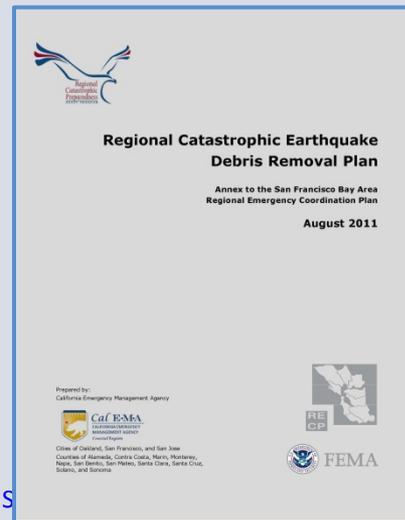
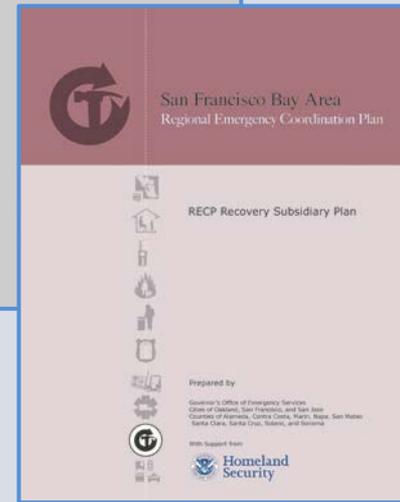
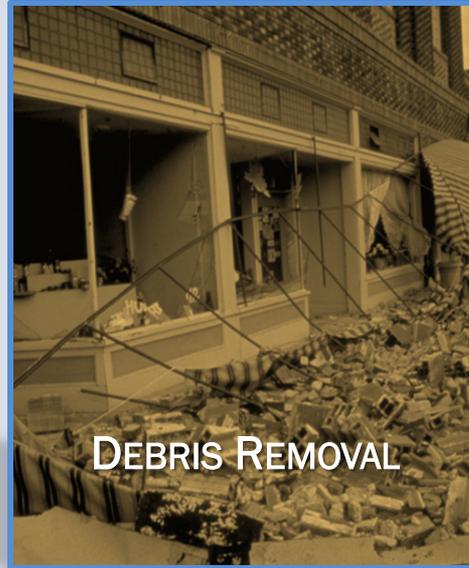


PLAN STRUCTURE

- **Main Body:** Provides operational details for each of the issues identified on the previous slide
- **Appendix A:** Glossary of acronyms, abbreviations, and key terms
- **Appendix B:** Maps referenced in the Plan
- **Appendix C:** Authorities, Regulations, and Requirements that affect Debris Removal Operations
- **Appendix D:** Tables referenced in the Plan
- **Appendix E:** Information Collection Plan



PLAN RELATIONSHIPS



CATASTROPHIC EARTHQUAKE SCENARIO

- The plan is based on a catastrophic earthquake scenario
- The scenario used for planning purposes is a recurrence of the 1906 moment magnitude (**M**) 7.9 earthquake on the northern segment of the San Andreas fault.



EARTHQUAKE CHARACTERISTICS

- Main shock lasts 45 to 60 seconds
- Epicenter is just outside the entrance to the San Francisco Bay, west of the Golden Gate Bridge
- Earthquake ruptures approximately 300 miles of the northern segment of the San Andreas Fault
- Threats and hazards resulting from the main shock are aggravated or recur during aftershocks, which continue for months after the main shock



REGIONAL IMPACTS

- 300,000 people seeking shelter
- 500,000 households without electricity
- 1.8 million households without potable water
- 7,000 fatalities
- 50 million tons of debris
- More than 1 million people requiring transportation assistance because of hazardous conditions or dislocation



REGIONAL IMPACTS (CONT.)

- Threats and hazards resulting from shaking, surface fault rupture, and liquefaction include:
 - Structural and nonstructural damage to buildings and infrastructure
 - Widespread fires
 - Subsidence and loss of soil-bearing capacity
 - Displacement along the San Andreas Fault
 - Widespread landslides
 - Hazardous materials spills and incidents
 - Dam/levee failure, resulting in flooding
 - Civil disorder



DEBRIS REMOVAL ASSUMPTIONS

[Enter the assumptions identified in your Debris Removal Plan. The assumptions are used to enhance the scenario description and provide a basis for the discussion]





MODULE 2: OBJECTIVES 1 TO 4

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OBJECTIVE 1: SITUATIONAL AWARENESS AND PRIORITIES

Discussion Time: Approximately 25 Minutes

Evaluate the tasks identified for the development of situational awareness and priority operations.

- **Discussion Point 1:** Developing situational awareness
- **Discussion Point 2:** Determining debris clearance priorities



OBJECTIVE 2: DEBRIS CLEARANCE

Discussion Time: Approximately 20 Minutes

Evaluate the tasks identified for debris clearance operations and discuss Public Assistance Program eligibility requirements for debris clearance operations.

- **Discussion Point 1:** Determining and securing debris clearance resources
- **Discussion Point 2:** Clearing debris
- **Discussion Point 3:** Understanding the Public Assistance Program's eligibility requirements for debris clearance



OBJECTIVE 3: BUILDING AND INFRASTRUCTURE ASSESSMENT

Discussion Time: Approximately 25 Minutes

Evaluate the tasks identified for the assessment of buildings and infrastructure and discuss Public Assistance Program eligibility requirements for the assessment of buildings and infrastructure.

- **Discussion Point 1:** Determining and securing safety assessment resources
- **Discussion Point 2:** Conducting safety assessments
- **Discussion Point 3:** Understanding the Public Assistance Program's eligibility requirements for safety assessments



OBJECTIVE 4: STAGING, PROCESSING, AND DISPOSAL OF DEBRIS

Discussion Time: Approximately 20 Minutes

Evaluate the tasks identified for the staging, processing, and disposing of debris and discuss Public Assistance Program eligibility requirements for the staging, processing, and disposing of debris.

- **Discussion Point 1:** Determining and securing debris management sites and monitoring resources
- **Discussion Point 2:** Determining debris management sites, processing facilities, and landfills
- **Discussion Point 3:** Understanding the Public Assistance Program's eligibility requirements for staging, processing, and disposing of debris





BEGIN WORKING LUNCH 30 MINUTES

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MODULE 3: OBJECTIVES 5 TO 7

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OBJECTIVE 5: DEBRIS REMOVAL

Discussion Time: Approximately 20 Minutes

Evaluate the tasks identified for debris removal operations and discuss Public Assistance Program eligibility requirements for debris removal operations.

- **Discussion Point 1:** Determining and securing debris removal resources
- **Discussion Point 2:** Removing Debris
- **Discussion Point 3:** Understanding the Public Assistance Program's eligibility requirements for debris removal

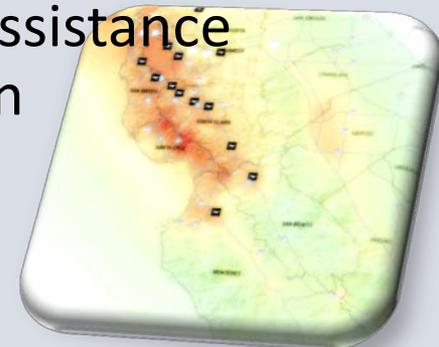


OBJECTIVE 6: DEMOLITION OF UNSAFE BUILDINGS

Discussion Time: Approximately 20 Minutes

Evaluate the tasks identified for demolition of unsafe buildings and infrastructure and discuss Public Assistance Program eligibility requirements for the demolition of unsafe buildings and infrastructure.

- **Discussion Point 1:** Determining and securing demolition resources
- **Discussion Point 2:** Demolishing unsafe buildings and infrastructure
- **Discussion Point 3:** Understanding the Public Assistance Program's eligibility requirements for demolition



OBJECTIVE 7: LONG-TERM RECOVERY

Discussion Time: Approximately 20 Minutes

Evaluate the tasks identified for long-term debris removal recovery operations and discuss Public Assistance Program funding requirements for long-term debris removal recovery operations.

- **Discussion Point 1:** Defining long-term recovery debris removal operations
- **Discussion Point 2:** Identifying organizations to handle long-term recovery debris removal operations
- **Discussion Point 3:** Understanding the Public Assistance Program's eligibility requirements for long-term debris removal recovery operations





MODULE 4: REVIEW AND FINDINGS

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REVIEW AND FINDINGS

- Reviewed Concepts
- Strengths
- Identified Gaps or Areas for Improvement



NEXT STEPS

- Complete Participant Feedback Forms
- [Next steps may include: the development of an After Action Report, an After Action Meeting, additional workshops or working groups, and revisions to the Plan]





THANK YOU!

Please leave your completed Participant Feedback Forms on the tables.

PROJECT POINTS OF CONTACT

[Agency Name]

[Name of Contact]

[Title/Position]

[Phone Number]

[Email]

[Agency Name]

[Name of Contact]

[Title/Position]

[Phone Number]

[Email]

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