Marin Operational Area

Mass Fatality Plan

MARIN OA EOP ANNEX

November 2012

RESOLUTION NO. 2012-119
RESOLUTION OF THE MARIN COUNTY BOARD OF SUPERVISORS

WHEREAS, a catastrophic disaster of a natural or man-made nature may occur with little or no warning; and

WHEREAS, such a catastrophic disaster will cause hundreds of fatalities in the San Francisco Bay Area, including many in the Marin Operational Area; and

WHEREAS, the County of Marin strives to provide the best care for victims of disaster and their loved ones; and

WHEREAS, the Marin Operational Area will need to coordinate with regional partners in the event of a catastrophic disaster to provide the best care to victims and their loved ones; and

WHEREAS, the Marin County Sheriff's Office of Emergency Services, in cooperation with regional planning experts, local emergency managers, and the Sheriff's Coroner Division, in an effort to identify best practices used in response to the occurrence of natural and man-made disasters, did develop the Marin Operational Area Mass Fatality Plan.

NOW, THEREFORE, BE IT RESOLVED, that the Board of Supervisors of the County of Marin hereby adopts the Marin Operational Area Mass Fatality Plan as presented to the Board and attached to this Resolution to be an annex to the Marin Operational Area Emergency Operations Plan (OA EOP).

BE IT FURTHER RESOLVED, by the Board of Supervisors of the County of Marin that the effective date of the Marin Operational Area Mass Fatality Plan shall be November 15, 2012.

PASSED AND ADOPTED at a regular meeting of the Board of Supervisors of the County of Marin held on this 13th day of November, 2012, by the following vote:

AYES: SUPERVISORS Katie Rice, Susan L. Adams, Judy Arnold, Kathrin Sears, Steve Kinsey

NOES: NONE

ABSENT: NONE

Steve Kinsey
PRESIDENT, BOARD OF SUPERVISORS

ATTEST:

CLERK

Table of Contents

1.0 Introduction

The Marin Operational Area (OA) Catastrophic Earthquake Mass Fatality Annex is a scenario-based, function-specific operations plan for Marin County that focuses on impacts and challenges associated with a 7.9 catastrophic earthquake on the San Andreas Fault and can be used in an All Hazards scenario. In this plan, the term "local government" is used to describe cities and towns within the OA.

In a San Francisco Bay Area catastrophic incident, Marin OA response resources are immediately overwhelmed. The twelve Bay Area counties and three major cities activate the San Francisco Bay Area Regional Emergency Coordination Plan (RECP). The Regional Coordination Group (RCG) conference call is coordinated and executed by the California Emergency Management Agency's (CalEMA) Coastal Regional Emergency Operations Center (REOC). The San Francisco Bay Area Operational Areas coordinate mass fatality information and make decisions to share resources via the RCG conference call.

This Mass Fatality Plan relies on the coordination mechanisms established in the San Francisco Bay Area RECP Coroner/Medical Examiner Subsidiary Plan. This plan establishes coordinating agencies and communication protocols for a mass fatality incident.

The OA Coroner/Medical Examiner representatives elect a Coroner/Medical Examiner Mutual Aid Coordinator to manage regional mass fatality resource requests and operations. The Law Enforcement Region II staffs the REOC Law Enforcement Branch to work with the Coroner/Medical Examiner Mutual Aid Coordinator. A San Francisco Bay Area Regional Disaster Mortuary Team can be established, which can be a combination of coroners, law enforcement, and emergency management.

A Time-Based Objectives Matrix is included in this plan; this matrix identifies recommended, overarching, chronological operational goals for quick response evaluation over the first 60 days of an incident. Marin OA cities and towns will coordinate information and decide how to share resources via the Emergency Coordination Conference Call.

This plan describes Mass Fatality Operational Phases, including:

- Notification
- Scene Evaluation and Organization
- Recovery of Remains
- Holding Morgue/Fatality Collection Point
- Level 1 Transportation and Temporary Storage
- Morgue Operations
- Level 2 Transportation and Temporary Storage
- Final Disposition

Public information is a key element in any catastrophic incident. The Marin OA Emergency Operations Center (EOC) will immediately activate a Joint Information Center (JIC) wherein various agency and jurisdiction Public Information Officers (PIO) coordinate verified public messaging. Only the County Coroner's Office will report the number of deaths in the OA.

Purpose

In a catastrophic incident, the number of fatalities will overwhelm OA Coroner and mortuary capabilities. The public will be traumatized by grief and the visual impact of fatalities. Images and the number of deaths reported in the media often drive the perception of the magnitude of an event. Public health and environmental health will be impacted. Fatality legalities and morgue operation objectives occur simultaneously with the priorities of working with families to identify the deceased, assist in fatality transportation, and determine final disposition.

The Marin OA will use this plan to make local mass fatality incident-appropriate decisions. The Mass Fatality Plan establishes roles and responsibilities for staging, command, control, and deployment of State and Federal resources in the Marin OA. Although this plan uses HAZUS estimates to project the catastrophic impacts of an earthquake and describe the resources required for fatality operations, this plan is also designed for use in other types of incidents, such as wildland fire or terrorist attack.

A Time-Based Objective Matrix is provided to assist in facilitating quick chronological decisions in a mass fatality incident. This plan outlines operational priority decisions and resource coordinating recommendations for the following mass fatality subjects:

- Search and recovery of the deceased;
- Incident site documentation;
- Collection of human remains and personal effects;
- Establishment of county temporary morgue or mass fatality incident morgue stations;
- Movement to the county temporary morgue or mass fatality incident morgue;
- Medicolegal death investigation;
- Positive identification of human remains, when possible;
- Release of the decedent and associated personal effects;
- Antemortem information collection; and
- Family Assistance Center operations.

2.0 Terms, Acronyms, and Definitions

Coroner - An elected public officer whose primary function is to investigate by inquest any death that does not clearly result from natural causes.

Death care industry - The death care industry includes funeral home or mortuary services, cremation services, and cemetery services. These services are locally owned and corporately owned licensed businesses that comply with federal, state, and local laws applicable to the handling of human remains.

Disaster Medical Assistance Team (DMAT) - A group of professional and para-professional medical personnel organized to provide rapid-response medical care or casualty decontamination during a terrorist attack, natural disaster, or other incident in the United States. DMATs are part of the National Disaster Medical System and operate under the Department of Health and Human Services.

Disaster Mortuary Operational Response Team (DMORT) - A federal response team comprising private citizens, each with a particular field of expertise (coroners, dental assistants, fingerprint specialists, etc.), that may be activated in the event of a disaster to provide technical assistance and personnel to recover, identify, and process the decedents.

Decedent - A person who has died.

Family - The term “family” is not limited to those with biological or marital ties. The term “family” applies to all persons with a common concern or love for the injured or deceased. This loosely defined term includes parents, siblings, grandparents, life partners, spouses, fiancées, children, long-term family friends, and even co-workers; those who support the immediate family and provide information to the various response agencies.

Family Assistance Center (FAC) - A secure facility where staff can provide information about missing persons who may be victims of the disaster, facilitate collecting information about missing persons, and facilitate the reunification of the deceased with next of kin.

Fatality - Death resulting from a disaster. This plan also uses the terms “dead,” “decedent,” and “human remains” to refer to a human fatality.

Final disposition - The burial, interment, cremation, or other final disposition of human remains.

Forensic pathologist - A physician who applies medical knowledge to questions of the law. The forensic pathologist’s specialty is the investigation and determination of cause and manner of death.

Human remains - The body of a deceased person, in whole or in parts, regardless of its stage of decomposition.

Logistics Response Assistance Teams (LRAT) - Responsible for maintaining and deploying the equipment caches for all National Disaster Medical System teams including DMORT, DMAT, and veterinary teams.

Mass fatality incident - As defined in the California Mass Fatality Management Guide, a catastrophic mass fatality incident is one in which the loss of life overwhelms California’s mutual aid system and requires extraordinary support from State, Federal, and private resources.

Medical Examiner - A medical examiner is a public official who investigates by inquest any death not clearly resulting from natural causes, who is a qualified physician, often with advanced training in

forensic pathology (the application of medical knowledge to questions of the law), and who is usually in an appointed position.

Morgue - A place in which dead bodies are temporarily kept until they are identified and claimed or until arrangements for final disposition have been made. Several types of morgues exist, including a county morgue, a temporary holding morgue or fatality collection point, an Incident Morgue, and a regional Incident Morgue.

County morgue - A morgue operated by a county.

Temporary holding morgue or fatality collection point - A short-term shelter providing privacy and security of human remains and associated evidence until transportation to the Incident Morgue is arranged. Holding morgues and/or fatality collection points are key components in the strategy for managing a surge of decedents.

Incident Morgue - A fully equipped mobile morgue that supports specially trained teams to provide morgue support to county Coroners/Medical Examiners that are affected by a catastrophic incident.

Regional Incident Morgue - Identical to the Incident Morgue in all but that decedents from multiple counties are processed at the same regional Incident Morgue. Coroners/Medical Examiners can opt in to or opt out of regional Incident Morgue participation. If the impacted Coroners/Medical Examiners opt in to the regional Incident Morgue, their primary responsibility is to prepare the decedents for transport to the Incident Morgue, assign a county-specific identification code, transport the decedents to the regional Incident Morgue, and sign death certificates.

3.0 Situation and Assumptions

3.0 Situation

Marin County has approximately 1800 deaths per year. Sheriff's Office Coroner Operations handles approximately 1000 of those deaths. Marin County has no government-operated morgue. The county has developed a private-public partnership with a local representative of the death care industry who provides contracted morgue facilities and services.

3.1 Authorities, Rules, and Regulations

Nothing in this plan should interfere with, or usurp, the authority of the local Coroner/Medical Examiner in carrying out his or her duties and responsibilities.

Fundamentally, the duty of the Coroner/Medical Examiner is to inquire and determine the circumstances, cause, manner, and mode of certain deaths as defined in Government Code, State of California, Section 27491, and Health and Safety Code Section 102850. The government penal and civil codes pertinent to fatality management are detailed in the 2007 California Mass Fatality Management Guide.

Applicable mass fatality operations plans that establish State, San Francisco Bay Area Regional, and Marin Operational Area authorities, rules, and regulations are listed below. Other State and Federal roles that apply to this Mass Fatality Plan are listed in Appendix B.

The 2005 San Francisco Bay Area Regional Emergency Coordination Plan (RECP)

http://develop.oes.ca.gov/WebPage/oeswebsite.nsf/Content/F39818FB706ECED68825743D00738C6A?OpenDocument

The RECP Base Plan provides an all-hazards framework for collaboration among responsible entities and coordination during events which affect the San Francisco Bay Area counties as a Region. The RECP defines procedures for regional coordination, collaboration, decision-making, and resource sharing among emergency response agencies in the Bay Area. The RECP Coroner/Medical Examiner Mutual Aid Subsidiary Plan and Mass Fatality Plan Annex are coordinating documents to this Marin County EOP Mass Fatality Annex.

The 2008 FEMA Catastrophic Incident Concept of Operations and Bay Area Earthquake Plan

http://www.calema.ca.gov/TrainingandExercises/Documents/CA%20Catastrohpic%20Incident%20Base%20Plan.pdf

http://www.calema.ca.gov/TrainingandExercises/Documents/BayArea_EQ_ReadinessCONPLAN.pdf

The FEMA Catastrophic Incident Base Plan and San Francisco Bay Area Earthquake Readiness Response Plan establish the Concept of Operations for the joint Federal and State response to, and recovery from, a catastrophic incident in the State of California, and in the Bay Area, respectively. The Concept of Operations defines the joint State/Federal organization and operations that support the affected local governments and other entities in the incident area. The Concept of Operations also describes the integration of Federal resources into the State-led response to a catastrophic incident to achieve unity of effort.

The 2006 California Coroners' Mutual Aid Plan

http://www.calema.ca.gov/LawEnforcement/Documents/coroners%20mutual%20aid%20plan.docx

This plan will adhere to the requirements and processes of the State of California Coroners' Mutual Aid System and Plan. The primary purpose of the Coroners' Mutual Aid System is to complement and support law enforcement activities during incidents that cause multiple fatalities. The system is intended to provide expanded coroner/medical examiner capabilities for local, State, and Federal agencies, and to act as a conduit for Federal assistance to all local jurisdictions.

The 2007 California Mass Fatality Management Guide
http://www.calema.ca.gov/LawEnforcement/Pages/MassFatalityPlan.pdf

The California Mass Fatality Management Guide provides a framework to facilitate an organized and effective State response to an event involving overwhelming, catastrophic loss of life in California. The guide recognizes the need to identify State resources that may be applied to a mass fatality incident and provides planning guidance to State and local agencies in preparation for and response to this incident.

3.2 Mass Fatality Management

- Widespread geographical dispersion of fatalities and a number of hidden and some destroyed human remains will hinder accurate and timely confirmation of fatalities and locations.
- Determining the jurisdiction of a fatality may present unforeseen complexities (i.e., military, private, and/or tribal issues may generate jurisdictional and/or political challenge).
- Marin County OA will be overwhelmed with fatalities almost immediately.
- Coroners/Medical Examiners will be impacted by a significant lack of mass fatality management response capabilities and resources.
- Blocked transportation routes in need of clearance or repair may delay Coroner transportation operations for more than 72 hours.
- Coroners/Medical Examiners will require mutual aid beyond the regional level and response assistance from State and Federal entities.
- California's Coroners' Mutual Aid System will be activated immediately.
- In the event of a disaster, local government EOCs may be requested to provide various resources for fatality response and recovery operations through mutual assistance requests. Due to the scope of the incident, the resources requested may or may not be available. The inability of local government to assist would likely lead to requesting and utilizing resources from outside the OA.
- The OA Coroner's Office will activate Family Assistant Centers (FAC) to provide a central location to help immediate family, other relatives, and friends of those persons directly affected by the incident.
- All Family Assistant Centers (FAC) will be Access and Functional Needs (AFN) accessible.
- Mutual aid and regulatory revisions may be leveraged to support the death care industry in mass fatality operations.
- Coroners/Medical Examiners, hospitals, and the death care industry will coordinate closely to maximize surge capacity response capabilities.
- In-bound mutual aid regional, State, and Federal mass fatality management response resources will be delayed for more than 72 hours.
- Coroner/Medical Examiner supplies and equipment necessary for the response may not be readily available.
- Loss of power, inadequate water supply, and damaged communications systems will impede efforts to recover and manage the volume of dead, including efforts to assess the operability of pre-identified mass fatality facilities.

- Resources for remains processing, death certificate issuance, and compliance with environmental and building code regulations will be significantly constrained.
- Comprehensive OA hospital preparedness plans, establishing death care policies and procedures, may not be fully institutionalized.
- Care for the deceased may not be prioritized in hospital emergency efforts.
- OA Coroner tracking systems for human remains and personal effects, needed to support regional Incident Morgues, may be insufficient or missing.
- The lack of a standardized and institutionalized local, regional, and statewide human remains tracking system will be problematic.
- The lack of a standardized and institutionalized credentialing system for mass fatality management response personnel will be problematic.
- The supply of refrigerated trucks will not meet the demand, making it difficult to ensure proper storage and transportation for the deceased.
- Loss of power and/or the lack of generators and/or fuel will affect the OA's ability to cold store human remains.
- The need to consider the varied cultural and religious practices of the deceased may complicate and delay the final disposition of human remains.
- California Department of Justice will assist in identifying the deceased through their missing person's database.
- Only the Coroner's Office will report OA number of deaths. All death count inquiries will be forwarded to the Coroner's Office.
- Local, State, and Federal agencies will coordinate with private insurance agencies to address fraud and wrongful death cases and to provide public information to mitigate fraudulent practices.

- Hospitals significantly expand morgue capacities by adapting alternative space to accommodate the surge in mortality rates.
- Local Coroners/Medical Examiners, hospitals, and the death care industry, as well as all emergency response agencies, continue to experience normal response caseloads.
- Most hospital emergency preparedness efforts focus on doing "the greatest good for the greatest number" of living patients. Care for the deceased may not necessarily be a priority.

4.0 Concept of Operations

4.1 Executive Summary

A catastrophic incident causes hundreds of deaths; the Marin County Operational Area EOC will be activated. County Coroner staff takes the lead in OA mass fatality operations to staff the EOC Operations Section, Coroner Division. OA Coroner staff will immediately coordinate with the Law Enforcement Region II Mutual Aid Coordinator and work within the California Coroners' Mutual Aid System. The OA EOC Coroner Division coordinates with Health and Human Services (HHS) to execute the Coroner's primary role of determining the most effective approach for managing human remains from incident to interment.

Local government jurisdiction EOCs are opened, and law enforcement leads local government fatality operations, assisting the OA Coroner in fatality transportation operations and establishing holding morgues and/or fatality collection points. Marin OA field operations execute search and recovery of human remains. Field assessments of fatality numbers and locations are reported to the OA EOC Coroner Division. The Coroner is the authority for reporting OA deaths. Emergency Medical Services (EMS) and hospitals refer all death count questions to the Coroner's Office.

The OA Coroner oversees human remains recovery to establish a confirmed identification for each decedent and complete required investigations. Human remains, fragments, and personal effects are collected at the holding morgue/fatality collection point and sorted for potential ease of identification and verification of each case number. Suspicious deaths are documented for further review at a county or incident morgue.

OA EOC Coroner Division staff coordinates a transportation schedule to transfer the decedent to an identified morgue. Transportation schedules operate on a 24-hour basis. State and Federal Department of Transportation (DOT) requirements are satisfied for the transportation of human remains.

Marin OA morgue operations are facilitated at temporary, county, or regional Incident Morgues. The OA EOC Coroner Division coordinates with the Law Enforcement Region II Mutual Aid Coordinator when deciding to opt in to or opt out of using a regional incident morgue and/or to request Federal Disaster Mortuary Operational Response Teams (DMORT). These tasks will be executed during morgue operations: documenting the cause, manner, and mechanism of death; performing autopsies; confirming the identity of the deceased; providing a physical account of all deceased directly affected by the incident; providing death notification and a death certificate; and releasing the deceased and associated personal effects to the next of kin for final disposition..

OA EOC Coroner Division coordinates with morgue personnel to oversee temporary storage operations and transportation of the decedent to a final disposition location. Family Assistant Centers (FAC) are established to assist the legal next of kin in determining the best final disposition option. Final disposition options include individual burial, State-sponsored individual burial, entombment, temporary interment, voluntary cremation, and involuntary cremation. The legal next of kin will provide final disposition instructions to the morgue. The morgue coordinates transportation of the decedent for final disposition. The OA Coroner arranges transportation and handling of human remains for State-sponsored final disposition.

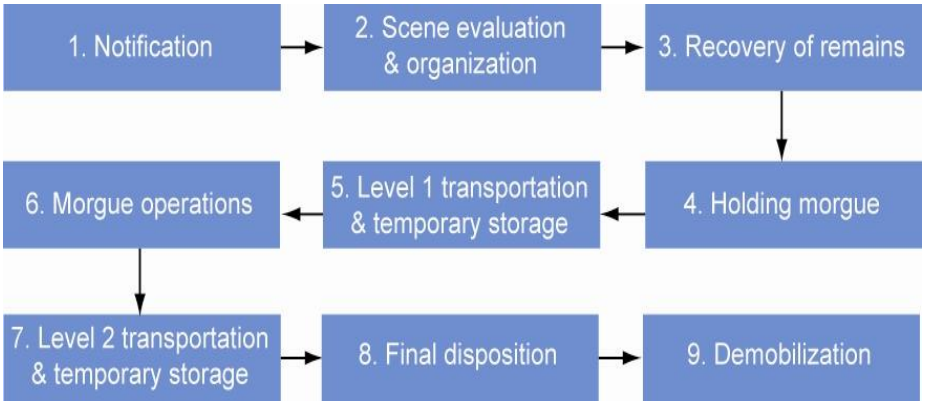
Local government and OA EOC staff coordinate with American Red Cross (ARC) to establish FAC locations and operations. OA Public and Mental Health personnel, as well as OA death care industry personnel, will assist in staffing FACs. FACs will do the following: provide a uniform level of immediate help to all survivors and families; establish a system to collect information from families of the deceased; assist in decedent identification; provide an understanding of fatality management operations to the families of the deceased; provide information on immediate financial assistance to the decedent's families to help cover funeral costs and other related expenses until insurance claims or settlements take place.

The OA EOC Coroner Division works within the California Coroners' Mutual Aid System to determine the end of Marin OA mass fatality operations and to demobilize the OA EOC Coroner Division.

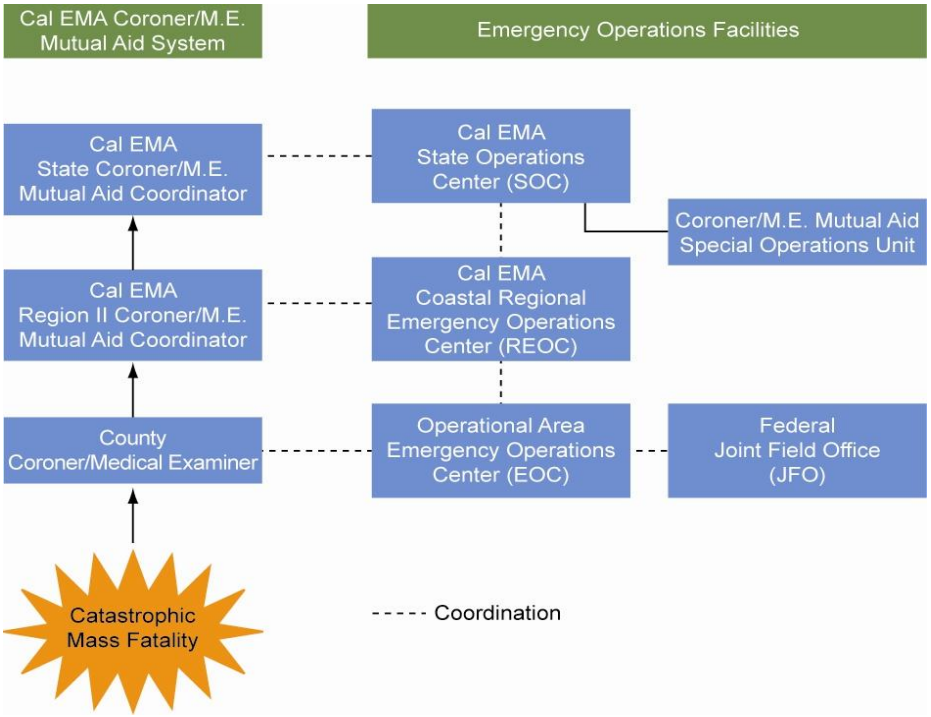
4.2 Operational Charts

The mass fatality operational charts below depict a number of mass fatality operational processes. These charts provide a snapshot view of more complex procedures typically used following a mass fatality incident. Please see the appendix or plan identified in the title of each chart for further detail.

Mass Fatality Management Operational Phases
See Appendix E for further detail on Mass Fatality Operational Phases



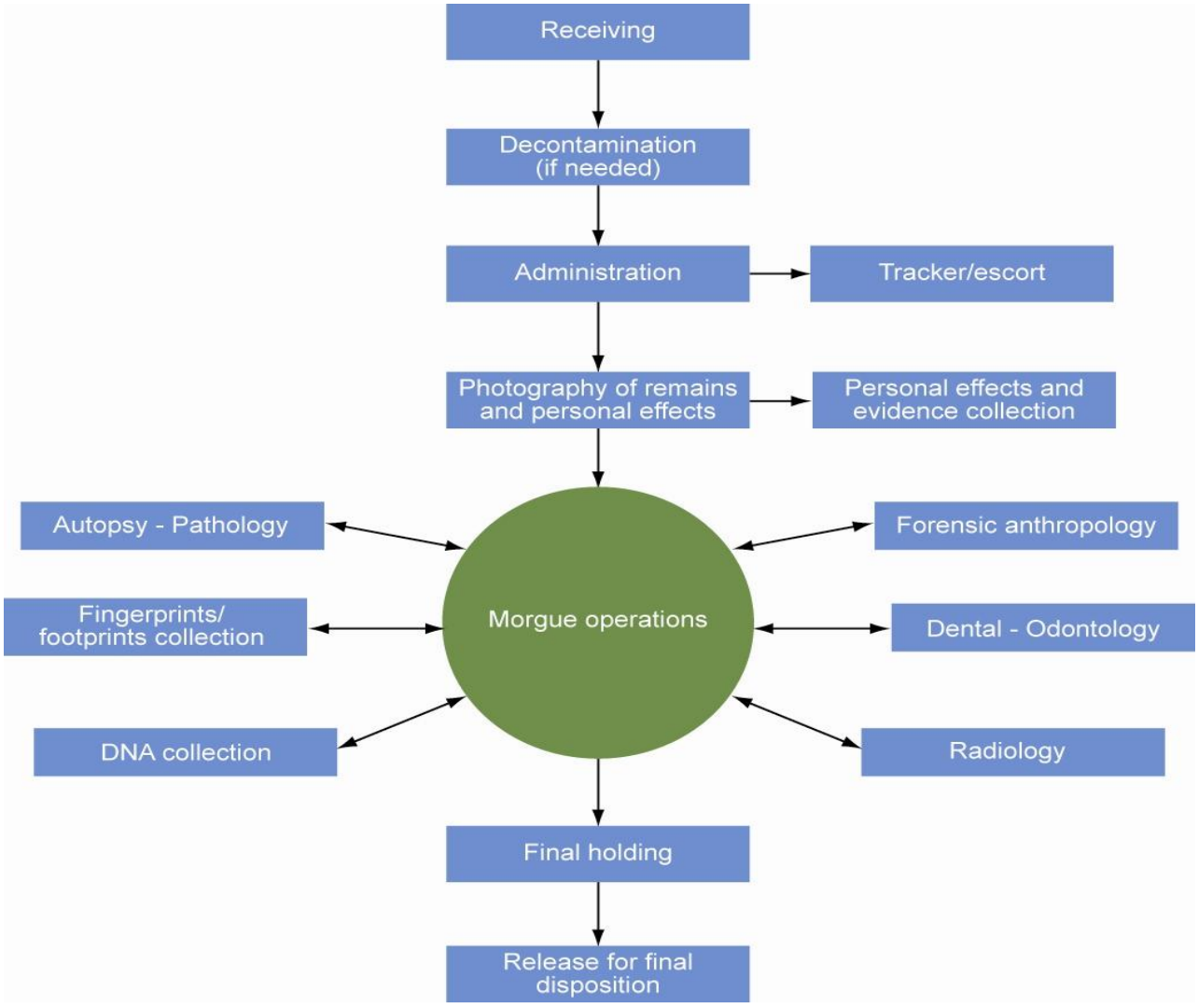
Mass Fatality Mutual Aid Coordination
See 2007 California Coroner's Mutual Aid Plan for further detail



Morgue Operations: Human Remains Processing

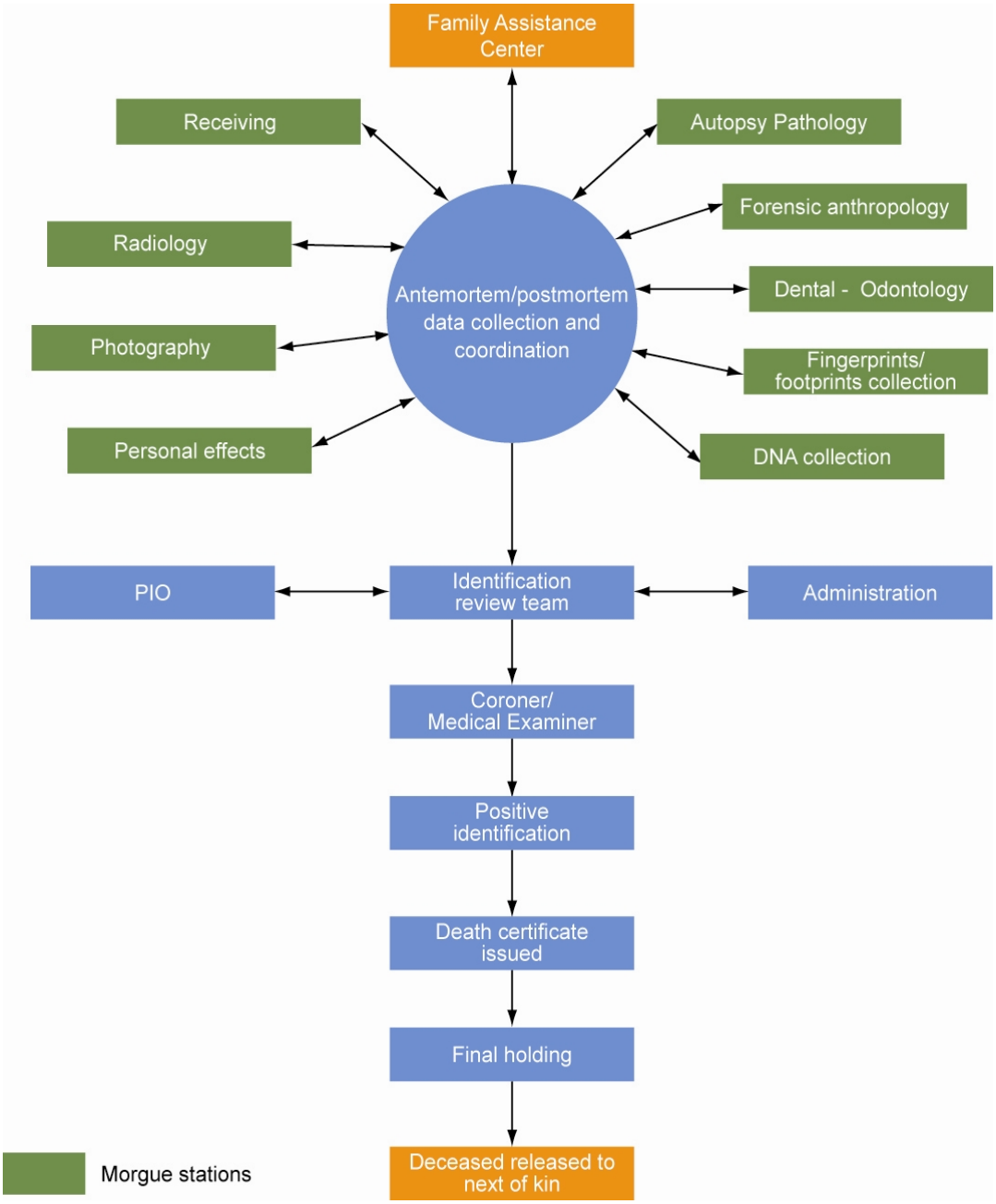
Please see Appendix E Phase 6 for further detail on Morgue Operations.

Morgue operations are the most resource-intensive activity due to workforce requirements, logistical requirements, and emotional stress. Meticulous data management is an absolutely essential function of the morgue to confirm identification and ensure that the correct remains are released to the next of kin. The deceased must be treated with dignity and respect.



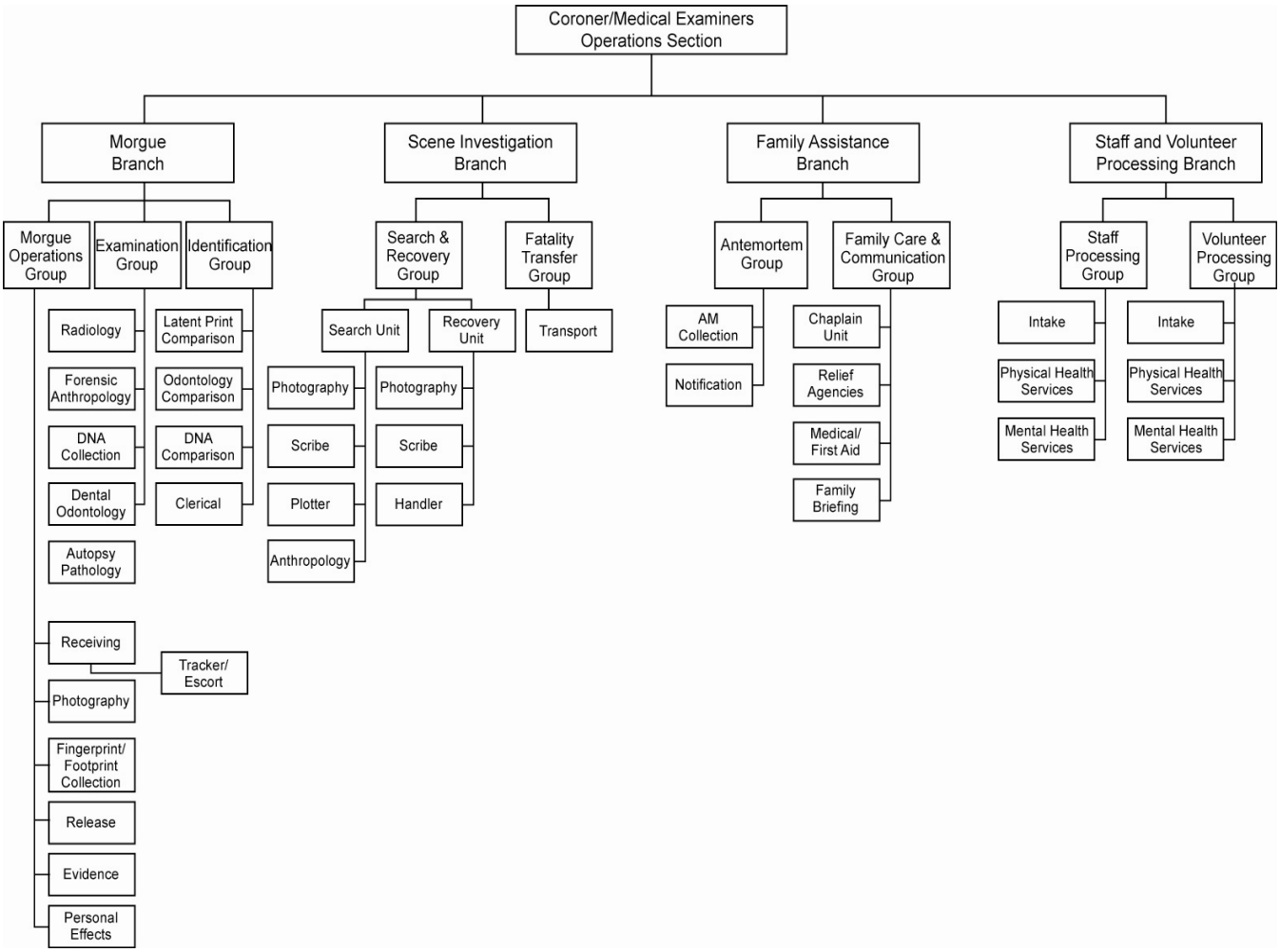
Family Assistance Center Operations (FAC)

See Appendix E Phase 8 for further detail on Family Assistance Centers.



ICS Organization - Coroner/Medical Examiner Operations

See California Mass Fatality Guide for further detail on the ICS Organization of Coroner/Medical Examiner Operations.



5.0 Roles and Responsibilities

Marin Operational Area EOC Roles and Responsibilities

See Appendix B for additional Federal, State, regional, non-governmental and private sector regulated and suggested roles and responsibilities.

COMMAND STAFF

EOC Director

- Exercises authority to direct altered death care standards and seek waivers of selected related regulatory codes, as needed, to allow for effective and timely fatality management.

Legal Officer

- Advises EOC Director and staff in legal matters regarding mass fatalities.

Business Liaison

- Liaises with private sector death care resources to facilitate resource requests.
- Is prepared to conduct business organization outreach regarding mass fatality objectives and status.

PIO/JIC

- Distributes mass fatality messaging to address ongoing public concerns.
- Is prepared to supply death care public information to meet mass fatality objectives.
- Is prepared to assist hospitals with mass fatality public information messaging and distribution.
- Is prepared to provide public information at Family Assistance Centers (FAC).
- Is prepared to utilize government-affiliated volunteer organizations, faith-based organizations (FBO), non-governmental organizations (NGO), community-based organizations (CBO), and private sector organizations to conduct alternative public outreach strategies.
- Reports Coroner-confirmed deaths only.

OPERATIONS SECTION

Coroner Division

- Leads overall mass fatality operations.
- Coordinates with State Law Enforcement Region II Mutual Aid Coordinator.
- Participates in the State Region II Coroners' Mutual Aid Plan.
- Coordinates with the Public Health Unit to establish mass fatality goals.
- Activates and requests Federal DMORT resources in coordination with the Coroner Division.
- Initiates inquiries to the State to implement altered standards of death care, as necessary.
- Provides appropriate fatality public messaging to the PIO Section.
- Reports deaths to regional operations, JIC, and press.
- Is prepared to activate a Coroner Department Operations Center (DOC), as necessary.
- Provides fatality investigation direction to field personnel.
- Is signatory of death certificates for all incident-caused fatalities.
- Coordinates recovery, storage, transport, processing, and final disposition of decedent and human remains.
- Establishes temporary, county, and regional morgue operations, as necessary.
- Provides guidance and ensures all morgue operations are conducted according to State and County Coroner death care standards.

- Activates agreements with death care industry organizations to access transportation, temporary refrigeration, and mortuary resources.
- Coordinates with Public Health Division to meet hospital fatality needs.
- Coordinates with the Public Health Division to provide incident analysis, evaluations, and guidance on decisions to request DMORT resources.
- Coordinates with OA leadership and the Public Health Division to opt in to or out of a DMORT Regional Morgue.
- Coordinates with the State regarding all State-sponsored final disposition situations.
- Coordinates with County Assessor's Office regarding decedent property and belongings.
- Coordinates with ARC Division to activate Family Assistance Centers (FAC) operations.
- Coordinates with ARC to provide appropriate FAC public messaging for the PIO Section.
- Works with Planning & Intelligence Section to establish a Coroner DOC and mass fatality operations demobilization plan.

Public Administrator's Office (agency in support to Coroner Division)

- Responsible for decedent affairs when:
  - Next of kin are unknown or come forward;
  - Next of kin reside outside the United States or decline to act for the decedent;
  - Assets are "subject to loss, injury, waste or misappropriation…" (Probate Code §7601[a]); and
  - Appointed administrator or executor fails to act (properly).

Death Care Industry: funeral homes, crematoriums, cemeteries (agencies in support of Coroner Division)

- Assists with morgue operations, which may include the following:
  - Collecting antemortem data;
  - Discussing final disposition options; and
  - Staffing FACs.

Law Enforcement Branch

- Identifies, secures, and reports locations of fatalities in the field.
- Provides security and perimeter control where remains are collected, stored, or processed.
- Conducts fatality investigation procedures.
- Is prepared to activate County Search and Rescue (SAR) operations to meet mass fatality objectives.
- Assists in fatality transportation security and coordination.

Fire Branch

- Identifies, secures, and reports locations of fatalities in the field.
- Performs search, rescue, and recovery activities to meet mass fatality objectives.
- Assists in fatality transportation coordination.
- Assists with decontamination operations.

HazMat Division

- Provides guidance in fatality hazardous materials situations.
- Recovers contaminated human remains and personal effects.
- Conducts decontamination of live persons and human remains.

Medical Health Branch

- Coordinates with Coroner Division to meet mass fatality objectives.
- Assists with FAC operations.
- Provides public health guidance in fatality operations.
- Provides technical guidance to prevent the spread of disease.

- Provides information on infection control measures.
- Provides vital statistics support to Coroner operations.

Emergency Medical Services Division

- Coordinates and provides guidance to hospitals, health care organizations, and field treatment site operations to meet mass fatality objectives.
- Coordinates hospital, health care organizations, and field treatment site death count numbers with Coroner Division.
- Activates Hospital Liaison Division, as needed.
- Refers all official death count questions to the County Coroner's Office.

Environmental Health Division

- Works with public health staff and morgue operations to prevent the spread of contagious disease.
- Provides assessment and technical assistance regarding the impact of fatality management/morgue operations on the environment, including the disposal of medical wastes, wastewater, or hazardous wastes, as needed.

Mental Health Division

- Coordinates with ARC to provide necessary mental health assistance at FAC.
- Coordinates with Personnel Unit to provide mental health assistance to response personnel.
- Is prepared to provide mental health assistance to meet mass fatality objectives.
- Disseminates information to the community on stress management through the JIC.

American Red Cross Division (ARC)

- Coordinates with Coroner Division to lead FAC set up, staffing, and operations.
- Requests and provides FAC mental health resources, as needed.
- Is prepared to utilize government-affiliated volunteer organizations, FBOs, NGOs, CBOs and private sector organizations to conduct FAC operations.
- Provides additional services, such as family escorts, a family assistance hotline, interpretation and translation, childcare, coordination of therapy dogs, supervision of dining areas, and public affairs.
- Assists with the planning of memorial services.

Public Works Branch

- Identifies, secures, and reports locations of fatalities in the field.

Road Maintenance Unit

- Is prepared to establish priority clearance routes to morgues to meet mass fatality objectives.

PLANNING & INTELLIGENCE SECTION

Marin County Office of Education (MCOE) Unit

- Is prepared to provide incident and temporary morgue resources.
- Is prepared to provide fatality transportation resources.

LOGISTICS SECTION

Personnel Unit

- Assesses mental health needs of EOC and response staff as related to mass fatality incidents.
- Coordinates with Mental Health Division to provide counseling as needed.

Transportation Unit

- Coordinates with Coroner Division to transport human remains to meet mass fatality objectives.
- Is prepared to provide transportation resources for FAC.

FINANCE & ADMINISTRATION SECTION

Finance & Administration Section

- Assists Coroner Division and County Assessor's Office to meet mass fatality objectives regarding decedent affairs.

Marin Operational Area Local Government Roles and Responsibilities

LOCAL GOVERNMENT OPERATIONS

Cities and Towns

- Open EOC and coordinate operations with OA EOC.
- Provide direction from Coroner Division to field personnel regarding fatality operations.
- Gather and report information from first responders regarding fatality situations and locations to OA EOC.
- Coordinate staff and assist FAC operations, as needed.

Local Government Director of Emergency Services

- Declares local emergency, as needed.
- Coordinates with OA EOC Management to facilitate OA emergency declaration.

Local Government Law Enforcement

- Identifies, secures, and reports fatality locations to OA EOC.
- Provides security and perimeter control where remains are collected, stored, or processed.
- Is prepared to perform fatality search, rescue, and recovery activities.
- Is prepared to conduct fatality investigation procedures.
- Assists in fatality transportation security and coordination.

Local Government Fire

- Identifies, secures, and reports fatality locations to OA EOC.
- Is prepared to perform fatality search, rescue, and recovery activities.
- Assists in fatality transportation coordination.
- Assists with decontamination operations.

Local Public Information Officer (PIO)

- Staffs and coordinates PIO efforts with OA JIC.

6.0 Time-Based Objectives Matrix

The Time-Based Objectives Matrix below comprises a guiding set of chronological decision triggers, operational objectives, and related tasks to be completed in order to achieve those objectives in the event of a catastrophic incident. Operational phases are overlapped, due to the structure of the matrix. A decision trigger to begin operations is identified. The Lead, Coordinating, and Supporting Entity columns identify the related agency or EOC role detailed in the definitions below. The actual incident will drive many elements of this matrix and could change the order of operations and/or role assignments described in this section.

E - Earthquake (ex: E +72 hours – Earthquake plus 72 hours, or 3 days after the earthquake)

Lead Entity – Agency or EOC role that fills the primary decision-making role. Staffs the lead branch or unit in the ICS structure to make lead decisions for the EOC Incident Action Plan (IAP); gathers critical field information and directs operations to achieve EOC IAP objectives.

Coordinating Entity – Agency or EOC role that staffs the coordinating branches or units in the ICS structure, gathers critical field information, and coordinates agency assets to achieve incident objectives.

Supporting Entity – Agency or EOC role that supports branches or units in the ICS structure by providing essential services and/or logistics necessary to achieve the incident objectives.

Timeframe	Operations	Lead Entity	Coordinating Entity	Supporting Entity
DECISION TRIGGER: Catastrophic or significant incident causing an estimated 500-1000 OA fatalities. **OBJECTIVE: Assess situation. Begin mass fatality operations planning.** **TASK: Gather field intelligence. Establish EOC mass fatality operational priorities. Establish death care industry networks.**				
E to E+ 72 hrs	Field response begins. Establish fatality collection point locations. Gather and report field intelligence to local government and OA EOC.	Fire, law enforcement, DPW, hospital field personnel	Local government EOC	
E to E+ 72 hrs	Activate local govt EOC. Gather and report field intelligence to OA EOC.	Local government emergency management	OA EOC	Fire, law enforcement, DPW, hospital field personnel
E to E+ 72 hrs	Activate OA EOC. Gather and report field intelligence to REOC.	MCSO OES	OA agencies	Local government EOC
E to E+ 72 hrs	Gather fatality reports and locations. Begin recovery of remains and personal effects.	Coroner Division	MCSO SAR, Public Health Unit, local government EOC	Fire, law enforcement, DPW, hospital field personnel
E to E+ 72 hrs	Establish communication with death care industry, hospitals, and health care organizations.	Coroner Division	Public Health Unit	Communications Unit, local government EOC
E to E+ 72 hrs	Establish systems for recovering and processing human remains and personal effects and for mass fatality investigations.	Coroner Division	MCSO SAR, Public Health Unit, local government EOC	Fire, law enforcement, DPW, hospital field personnel

E to E+ 72 hrs	Provide necessary tracking system resources to field personnel (e.g., forms, ID tags, body bags, personal effect bags)	Coroner Division	MCSO SAR, Public Health Unit, local government EOC	Resource Unit
E to E+ 72 hrs	Provide environmental health consult on fatalities in contact with water systems and sources.	Environmental Health Unit	Public Health Unit	Coroner Division
DECISION TRIGGER: Fatality intelligence confirms over 100 deaths. Fatalities are collecting in the field. Hospitals are overwhelmed and have no room for fatality storage. **OBJECTIVE: Begin mass fatality management. Coordinate with Law Enforcement Region II Mutual Aid Coordinator.** **TASK: Establish fatality transportation and temporary morgue operations. Work within the California Coroners' Mutual Aid System. Provide extended fatality management guidance to hospital personnel. Coordinate fatality public messaging with JIC.**				
E to E+ 72 hrs	Establish contact with Law Enforcement Region II Mutual Aid Coordinator.	Coroner Division	Law Enforcement Region II	Communications Unit
E to E+ 72 hrs	Initiate inquiries to the State to implement altered standards of death care, as necessary.	Coroner Division	California Region II Law Enforcement, Regional CalEMA, State CalEMA	Public Health, local government EOC
E to E+ 72 hrs	Establish Coroner Department Operations Center (DOC) as needed.	Coroner Division	MCSO SAR, Public Health, local government EOC	Death care industry
E to E+ 72 hrs	Establish temporary morgue operations. Identify mobile and stationary refrigeration units/facilities.	Coroner Division	Death Care Industry	Local government EOC, Private Sector Liaison
E to E+ 72 hrs	Coordinate fatality transportation to temporary morgues.	Coroner Division	Transportation Unit	DPW Roads, Water Operations
E to E+ 72 hrs	Coordinate with hospitals and health care organizations to assess situation and provide long-term mass fatality management guidance.	Coroner Division	Public Health Unit	Hospitals, health care organizations, local government EOC
E to E+ 72 hrs	Provide appropriate mass fatality public messaging and authorized death counts to JIC.	Coroner Division	PIO	Public Health Unit, Mental Health Unit, local government EOC
DECISION TRIGGER: Morgue operations are insufficient to handle fatality numbers. Neighboring counties request regional Incident Morgue participation. **OBJECTIVE: Coordinate with FEMA Region IX DMORT to access regional Incident Morgue resources.** **TASK: Determine regional Incident Morgue location. Provide regional Incident Morgue staff support. Provide public information regarding regional Incident Morgue operations.**				
E to E+ 72 hrs	Establish contact with DMORT.	Coroner Division	Law Enforcement Region II Coroner/Medical Examiner Mutual Aid Coordinator	CalEMA
E to E+ 72 hrs	Determine regional Incident Morgue location.	Coroner Division	Planning Section	Local government EOC

E to E+ 72 hrs	Opt in to or opt out of DMORT regional Incident Morgue operations.	Coroner Division	Law Enforcement Region II Coroner/Medical Examiner Mutual Aid Coordinator	Local government EOC
E to E+ 72 hrs	Communicate regional Incident Morgue requirements to field operations.	Coroner Division	MCSO SAR, Public Health Unit	Fire, law enforcement, DPW, hospital field personnel
E to E+ 72 hrs	Provide appropriate public messaging regarding regional Incident Morgue operations to JIC.	Coroner Division	PIO	Public Health, Mental Health, local government EOC
E to E+ 72 hrs	Support regional Incident Morgue operations with OA resources, as necessary.	Coroner Division	Resources Unit	Public Health Unit, local government EOC
DECISION TRIGGER: There are numerous fatalities in the Final Holding phase, ready for Final Disposition. There are numerous incoming next-of-kin inquiries regarding fatality identification and locations. **OBJECTIVE: Establish Family Assistance Center (FAC) operations.** **TASK: Identify appropriate FAC locations. Work with ARC to activate FAC operations and deliver appropriate services. Staff FAC with mental health professionals and other resources as needed.**				
E+72 hrs to E+14 days	Consider morgue, shelter and Local Assistance Center (LAC) locations in order to identify appropriate locations for Family Assistance Centers (FAC).	Coroner Division	ARC, Planning Section	Care & Shelter Branch, Public Health Unit, Mental Health Unit, local government EOC
E+72 hrs to E+14 days	Establish FAC operations.	ARC	Coroner Division	Identified services, CBOs, FBOs, NGOs, volunteers
E+72 hrs to E+14 days	Support FAC operations with OA resources, as needed.	Coroner Division	ARC, Planning Section	Care & Shelter Branch, Public Health Unit, Mental Health Unit, local government EOC, CBOs, FBOs, NGOs, volunteers
DECISION TRIGGER: Marin OA fatality numbers in Final Disposition are below 75. DMORT has determined regional Incident Morgue operations to no longer be necessary. **OBJECTIVE: Demobilize mass fatality operations.** **TASK: Demobilize DMORT operations. Transition to normal OA fatality management. Determine duration of continuing FAC operations.**				
E+14 days to E+60 days	Coordinate and support demobilization of regional Incident Morgue.	Coroner Division	DMORT	Public Health, Law Enforcement Branch
E+14 days to E+60 days	Transition to OA fatality management.	Coroner Division	Death care industry	Public Health, Law Enforcement Branch
E+14 days to E+60 days	Communicate and provide guidance to hospitals and health care organizations regarding transition to OA fatality management operations.	Public Health Unit	Coroner Division	Death care industry, PIO

E+14 days to E+1 year +	Assess timing of continuing FAC operations. Support FAC operations as long as necessary. Demobilize FAC operations when appropriate.	Coroner Division	ARC, Planning Section	Public Health Unit, Mental Health Unit, local government EOC, CBOs, FBOs, NGOs, volunteers
E+14 days to E+1 year +	Provide appropriate public messaging to the PIO regarding transition to normal OA fatality management operations.	Coroner Division	PIO	Public Health Unit, Mental Health Unit, ARC, local government EOC

APPENDICES

- **A. 7.9 San Andreas Earthquake Situation and Assumptions**
- **B. Regional, State, and Federal Roles**
- **C. Altered Death Care Standards**
- **D. Agency and Resource Support**
- **E. Operational Phases Detail**
- **F. Mass Fatality Management Toolkit**
- **G. Information Collection Priorities**
- **H. Marin Operational Area Morgue Capacity (November 2012)**
- **I. Family Assistance Center (FAC) Operations**
- **J. Public Information**
- **K. Transition to Long-Term Operations**

Scenario Event

The scenario event is an **M** 7.9 earthquake on the northern segment of the San Andreas fault. The basis for the scenario is a Hazards — U.S. Multi-Hazard (HAZUS-MH) analysis[1] performed by the Earthquake Engineering Research Institute, with support from the U.S. Geological Survey and the California Emergency Management Agency (Cal EMA), beginning in 2005 and modified in 2009 by URS Corporation for the Regional Catastrophic Preparedness Grant Program.

The characteristics of the scenario event and its impacts on the region are:

1. The earthquake occurs in January on a weekday at 1400 hours Pacific Standard Time.
2. A foreshock precedes the main shock by 20 to 25 seconds. There is no other warning.
3. The main shock lasts 45 to 60 seconds.
4. The epicenter is just outside the entrance to the San Francisco Bay, west of the Golden Gate Bridge.
5. The earthquake ruptures approximately 300 miles of the northern segment of the San Andreas fault, from the San Juan Bautista area in the south to Cape Mendocino in the north.
6. Shaking is felt in Oregon to the north, Los Angeles to the south, and Nevada to the east.
7. The estimated magnitude is **M** 7.9 with a Modified Mercalli (MM) intensity of VIII (severe shaking/moderate to heavy damage) to IX (violent shaking/heavy damage) in widespread areas of the most severely affected counties. Pockets in the affected counties experience instrument intensity of MM X (extreme shaking/very heavy damage), particularly areas immediately adjacent to the fault and areas where liquefaction is likely to occur. The shaking intensity and areas where liquefaction is likely to occur are shown on **Maps A-2** and **A-3**, respectively.
8. Ground shaking and damage occur in 19 California counties, from Monterey County in the south to Humboldt County in the north and into the San Joaquin Valley.
9. Damage is catastrophic in the areas that experience shaking intensities of MM IX and X and high or very high levels of susceptibility for liquefaction (i.e., areas adjacent to the fault in Marin, San Francisco, San Mateo, Santa Clara, Santa Cruz, and Sonoma counties).

[1] HAZUS-MH is a loss estimation software program that the National Institute of Building Sciences (NIBS) developed for FEMA. The version used for this analysis (HAZUS-MH MR3) was developed by NIBS in 2003.

10. Counties along the fault outside the Bay Area, such as Mendocino, may sustain damage and require response.
11. Central Valley counties such as Sacramento and San Joaquin may be affected immediately by evacuations and other response actions.
12. The rest of California and the Nation will be affected significantly by the need to respond, effects on the population, economic disruption, and media attention.
13. Threats and hazards resulting from shaking, surface fault rupture, and liquefaction include:
    - Structural and nonstructural damage to buildings and infrastructure, including widespread collapse of buildings
    - Widespread fires
    - Subsidence and loss of soil-bearing capacity, particularly in areas of liquefaction
    - Displacement along the San Andreas fault
    - Widespread landslides (see **Map A-4**)
    - Hazardous materials spills and incidents
    - Dam/levee failure resulting in flooding
    - Civil disorder
14. Threats and hazards resulting from the main shock are aggravated or recur during aftershocks, which continue for months after the main shock.
15. The earthquake does not generate a tsunami or seiche, despite its magnitude.
16. Potable water supply systems suffer major damage because of the following:
    - Extensive damage to pipelines from ground deformation
    - Interruption of pumps and treatment due to power outages
    - Damage to treatment facilities, storage facilities, and distribution infrastructure
    - Contamination of potable water systems because of damaged lines
17. The earthquake results in massive power outages, and auxiliary power systems and generators are not sufficient to meet critical needs.

Data Assumptions

Table 2-1 provides the estimated total number of fatalities by county/city based on URS HAZUS analysis.

Marin County Public Safety Officials estimate an average of 500-1000 deaths will occur during this catastrophic EQ scenario and disagree with the estimated fatality number of 110.

Table 2-1. Fatalities by County/City

County	Immediate Fatalities	Delayed2 Fatalities	Total Fatalities
Alameda	1,400	100	1,500
Contra Costa	200	10	210
Marin	100	10	110
Monterey	20	0	20
Napa	40	5	45
San Benito	5	0	5
San Francisco	2,100	100	2,200
San Mateo	900	50	950
Santa Clara	1,600	100	1,700
Santa Cruz	40	5	45
Solano	40	5	45
Sonoma	200	10	210
Regional Totals	6,645	395	7,040
Oakland	500	30	530
San Jose	900	50	950

The delayed fatalities projections are based on a general medical industry “rule of thumb” estimation that approximately 10 percent of Severity 3 injuries will result in delayed fatalities due to the lack of access to immediate hospitalization and medical treatment. HAZUS defines Severity 3 injuries as those that require hospitalization and can become life threatening if not promptly treated.

Mass Fatality operations will adhere to the following Rules and Regulations:

State

Emergency response operations in the region are conducted in accordance with:

- California Emergency Services Act (G.C. §§ 8550–8660)
- State of California Emergency Plan (G.C. § 8560)
- Standardized Emergency Management System (SEMS)

This Plan will also adhere to the requirements and processes identified in the following function-specific authorities, regulations, and requirements:

- Law Enforcement Guide for Emergency Operations (Redbook), September 2009
- Coroner/Medical Examiner Mutual Aid Quick Reference Guide, July 2009
- California Mass Fatality Management Guide, September 2007
- California Law Enforcement Mutual Aid Plan (Bluebook), December 2006
- California Coroners Mutual Aid Plan (Graybook), March 2006
- California Coroner Operations Guide (Part 2), February 2003

Federal

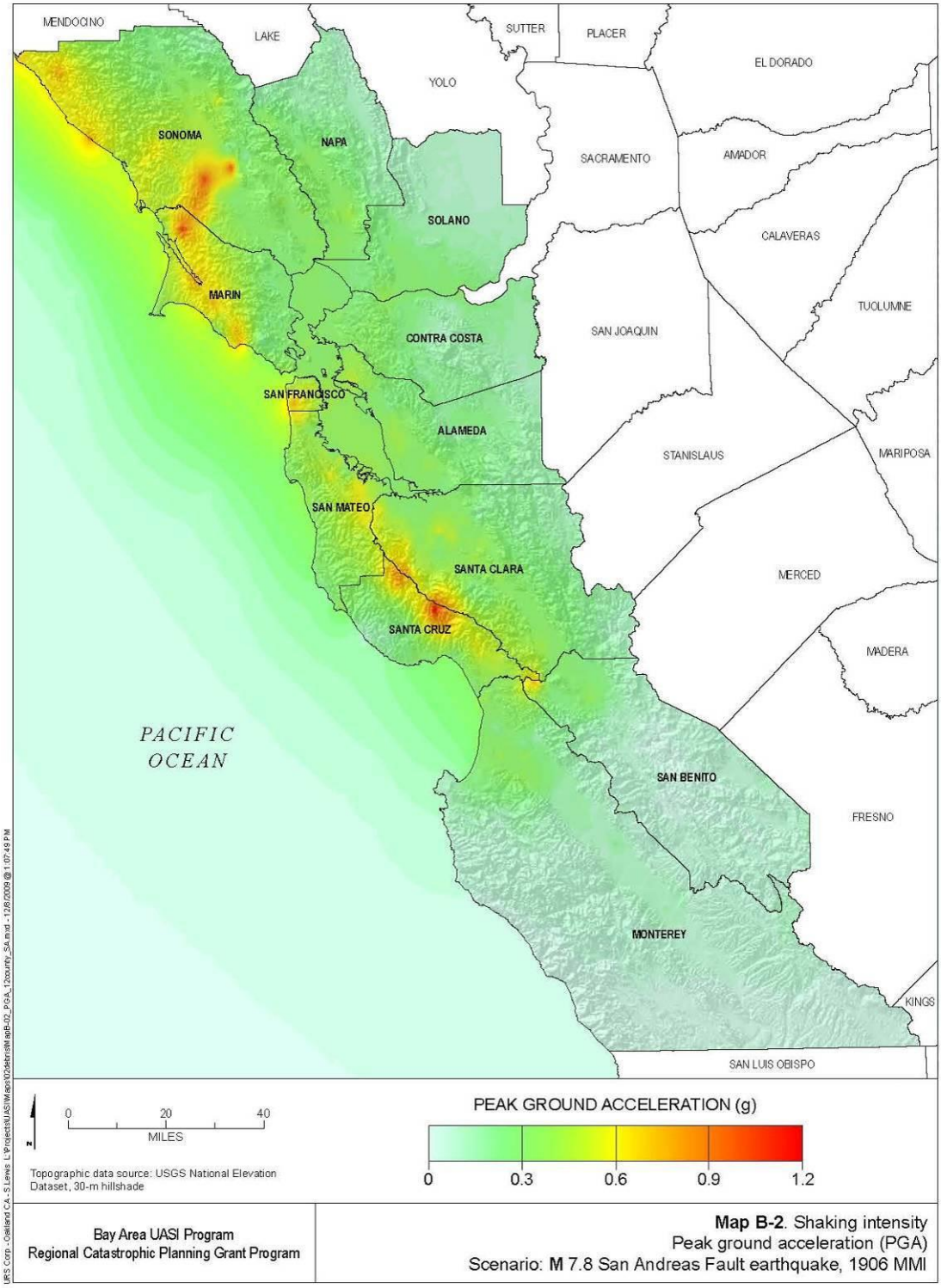
Federal operations in support of State and local governments are governed by the following:

- Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (42 U.S.C. §§ 5121–5206 [2008])
- National Response Framework
- National Incident Management System

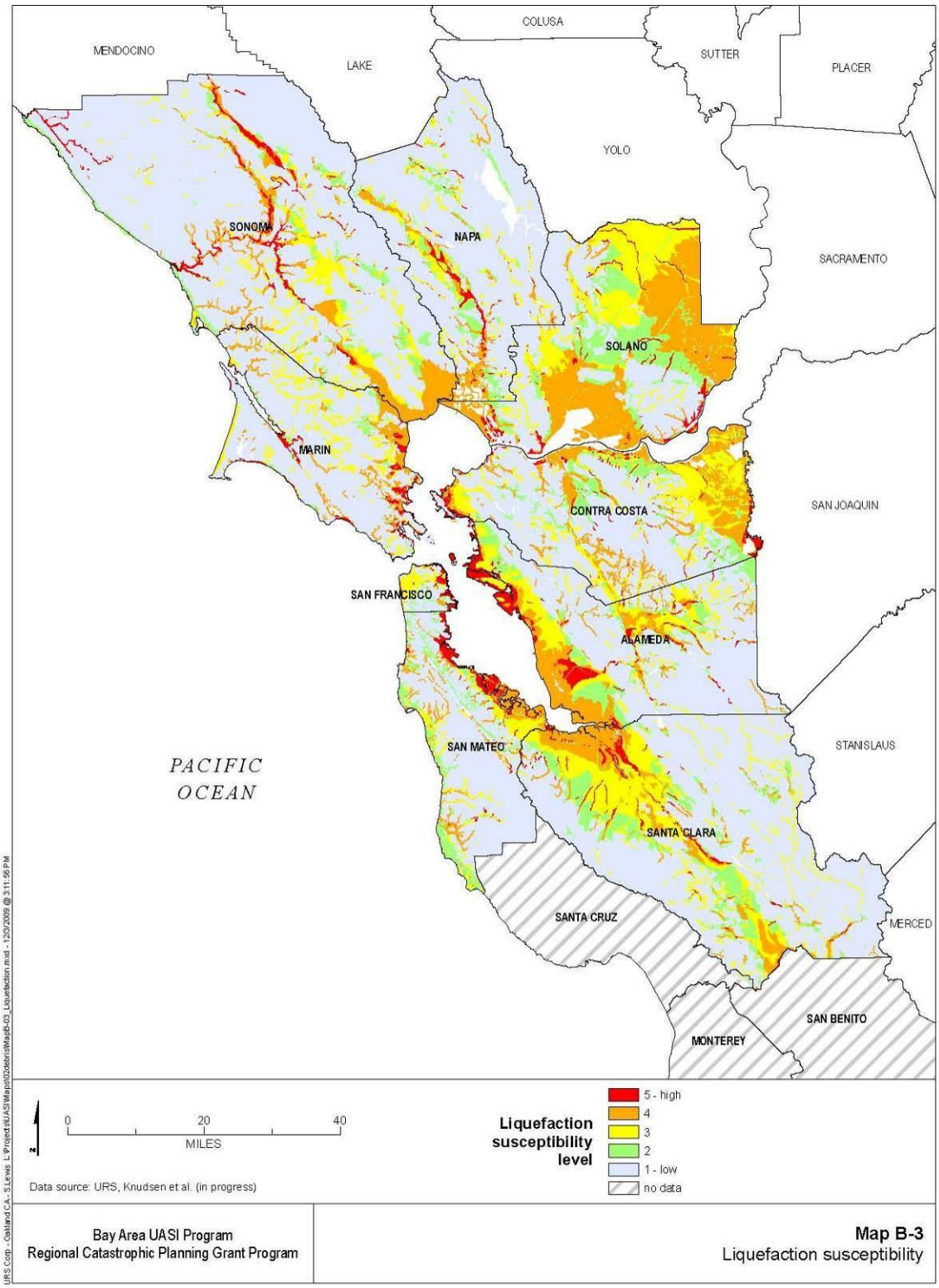
Additional function-specific authorities, regulations, and requirements are as follows:

- Implementing regulations for the Public Assistance Program (44 C.F.R. Part 206)
- U.S. Department of Homeland Security, Target Capabilities List. A Companion to the National Preparedness Guidelines, September 2007

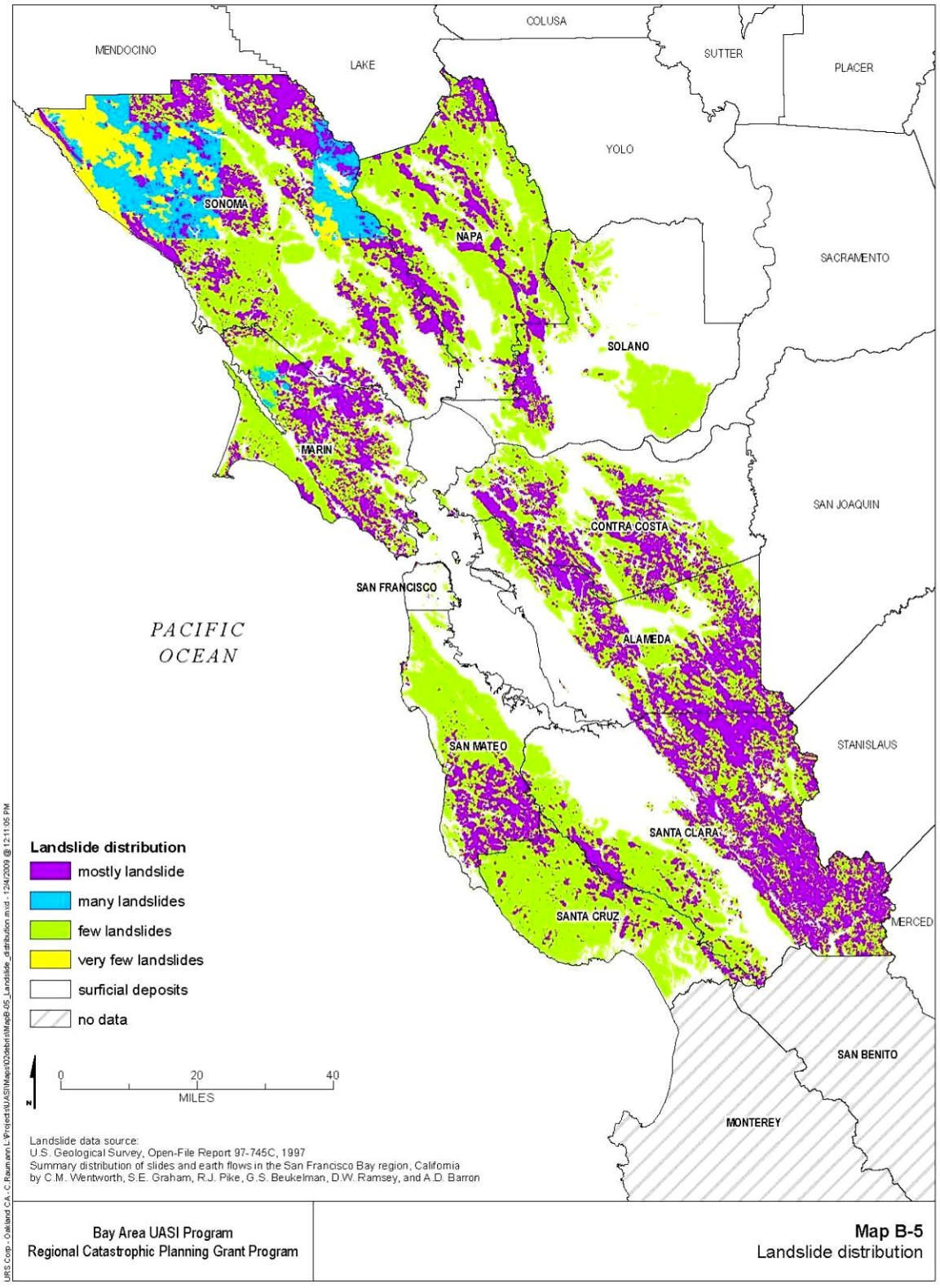
Map A-1. Twelve-county San Francisco Bay Area region..



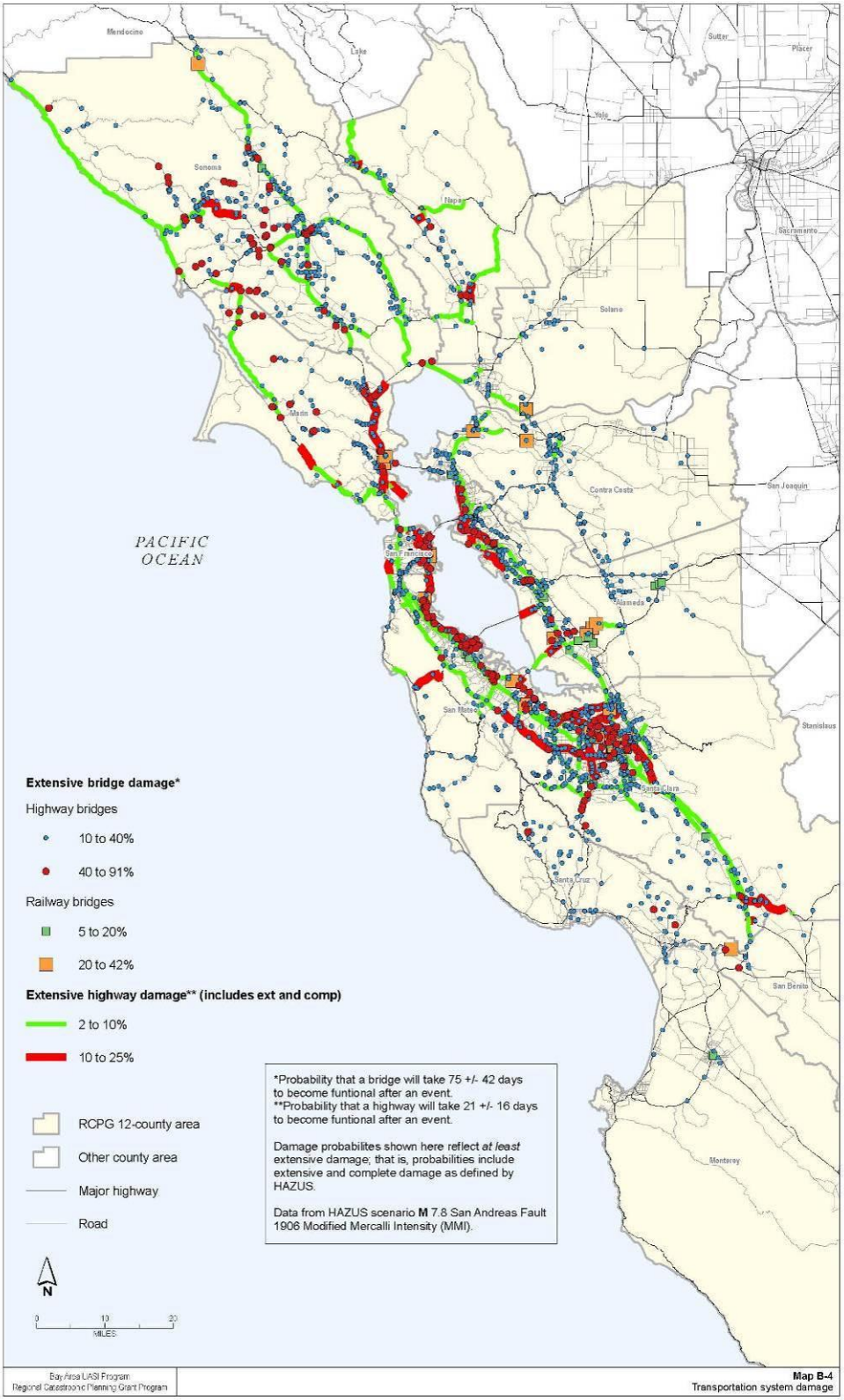
Map A-2. Liquefaction susceptibility.



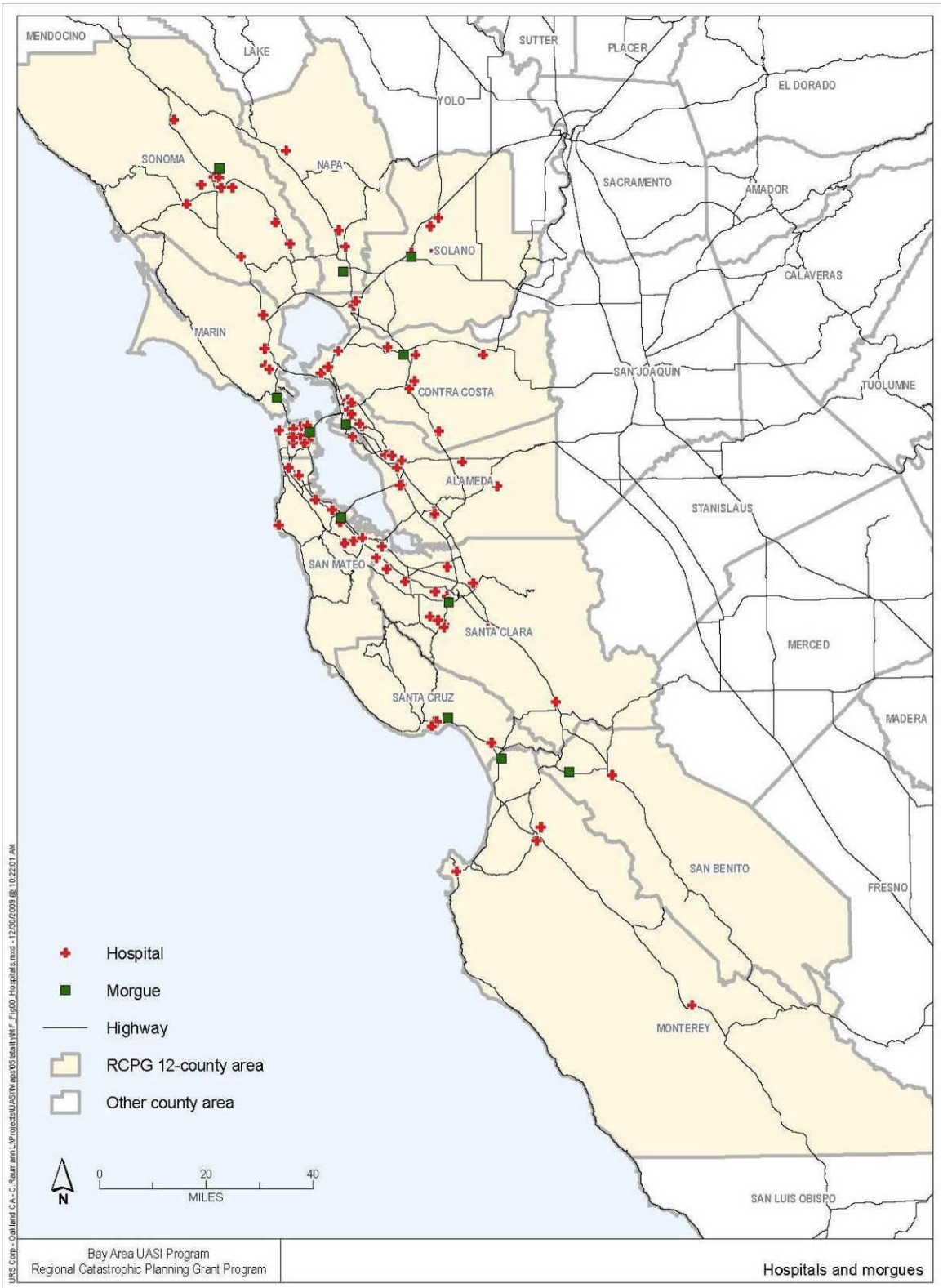
Map A-3. Shaking intensity.



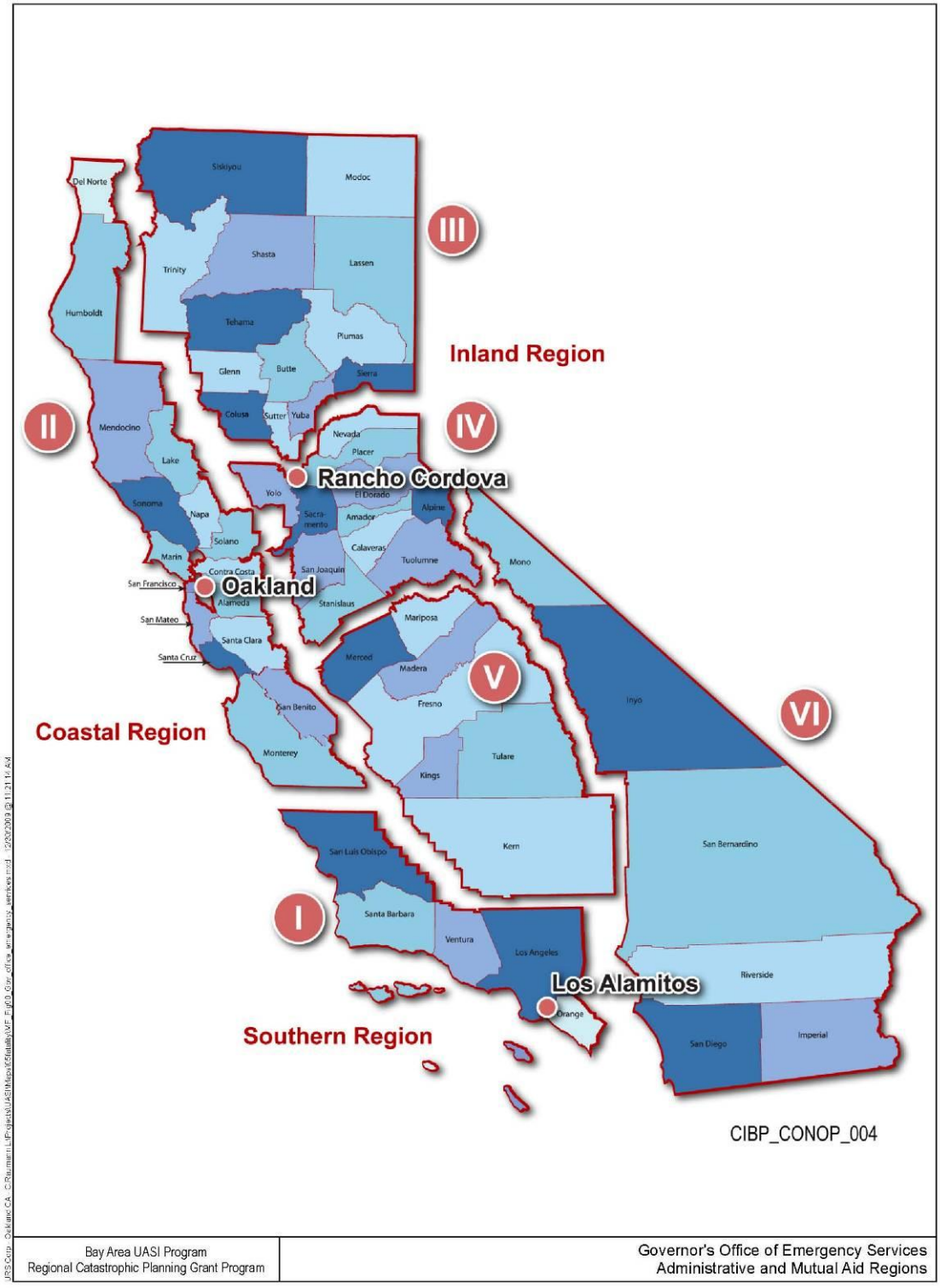
Map A-4. Landslide distribution.



Map A-5. Transportation system damage.



Map A-6. Hospitals. Morgue locations represent previous arrangements and should be disregarded.



Map A-7. California Law Enforcement Region Map.

Regional, State, and Federal Roles

Below are listed Federal, State, regional, non-governmental and private-sector regulated and suggested responsibilities by agency in a mass fatality incident.

Table 3-1. Operational Area agencies with mass fatality responsibilities.

Operational Area Agency	Responsibilities
Coroner/ Medical Examiner	Serves as the lead agency for the management of mass fatalities for the Operational Area
	Manages/coordinates the recovery, storage, transport, processing and final disposition of human remains
	Coordinates the activation of the FAC
	Signatory of death certificates for all incident cause fatalities
Law Enforcement	Provides security and perimeter control at sites where remains are collected, stored, or processed
	Collects/secures evidence gathered from remains when applicable
	Provides escort for the transportation of human remains, when appropriate
Environmental Health	Evaluates operation impacts on the environment
	Contains and disposes of contaminated water run off
	Collects waste resulting from Coroner/Medical Examiner operations
Executive/Chief Elected Official	Provides direction for the overall Operational Area coordination of Local Emergency response efforts
	Issues proclamation of a Local Emergency
Fire and Rescue	Assists with search, rescue, and recovery operations
	Assists with search and recovery operations
	Assist with decontamination operations
Hazardous Materials Teams	Provides expertise on hazardous materials
	Recovers contaminated human remains and personal effects
	Conducts decontamination of live persons and human remains
Mental Health	Provides counselors at FAC for the decedents' family members and response personnel
	Disseminates information to the community on stress management through the Operational Area JIC
Public Health	Provides technical guidance to prevent the spread of disease
	Provides information on infection control measures
	Assist with FAC operations
Public Administrator	Responsible for decedent affairs when:
	No next of kin are known or come forward
	Next of kin reside outside the United States or decline to act for the decedent
	Assets are "subject to loss, injury, waste, or misappropriation…" (Probate Code §7601[a])
	The appointed administrator or executor fails to act (properly)

FAC= Family Assistance Center

JIC = Joint Information Center

Table 3-2. Regional agencies with mass fatality responsibilities.

Regional Agency	Responsibilities
Region II Coroner/Medical Examiner Mutual Aid Coordinator	Supports Operational Area Coroner/Medical Examiner Mutual Aid Coordinators by filling or forwarding resource requests
	Allocates unassigned resources deployed to the region (see **Appendix B**, **Map B-7**)
	Providing status of resource requests and allocations to the Cal EMA Regional Level Coroner/Medical Examiner Unit Leader
Cal EMA Regional Level Coroner/Medical Examiner Unit Leader	Establishes and maintains communications with Coroner/Medical Examiner units at the Operational Areas and with the Region II Coroner/Medical Examiner Mutual Aid Coordinator
	Provides updates to the Cal EMA Regional Level Law Enforcement Branch Director about Coroner/Medical Examiner activities and issues within Region II
	Tracks Coroner/Medical Examiner Mutual Aid resource requests and provide updates to the Cal EMA Regional Level Law Enforcement Branch Director
	Coordinates the provision of non–law-enforcement resources in response to requests received through the Coroner/Medical Examiner Mutual Aid System
	Elevates resource requests to the Cal EMA State Level, when appropriate, in coordination with the Cal EMA Regional Level Law Enforcement Branch Director.

Cal EMA = California Emergency Management Agency

Table 3-3. State agencies with mass fatality responsibilities.

State Agency	Responsibilities
Cal EMA	Serves as the lead State agency for emergency management response
	Ensure the State is ready and able to mitigate against, prepare for, respond to, and recover from the effects of emergencies that threaten lives, property, and the environment
	Mobilize State resources, obtain Federal resources while maintaining oversight of the Mutual Aid System
	Coordinates integration of Federal resources into response and recovery operations
Cal EMA, Law Enforcement Division, Coroners' Mutual Aid Special Operations Unit	Serves as the custodian of the Coroners' Mutual Aid Plan
	Manages the State Law Enforcement, Search and Rescue and Coroners' Mutual Aid Systems
	Serves as the point-of-contact for the coordination of inter-regional coroner mutual aid, State agency resource mutual aid allocation, and out-of-state resource coordination (EMAC), and the use of Federal resources
California Department of Public Health	Assists the Coroner/Medical Examiner in the notification of spouse or next of kin through the State Registrar
	Assesses health hazards and ensure compliance with health regulations
	Provides emergency supplies of death certificates and permits for final disposition and training in their use
California Department of Justice	Missing/Unidentified Persons Section
	Assists California law enforcement agencies and official emergency services agencies in the physical or dental identification of missing or unidentified deceased persons through the comparison and matching of reports and records
	Provides expertise in the operation of the National Crime Information Center's Missing and Unidentified Persons System
	Bureau of Forensic Services
	Maintains 10 full-service crime laboratories in California
	– Crime scene specialists can assist in the collection and analysis of forensic evidence and human remains
	– Crime laboratory analysis applied to collected evidence
	Examines and compares questioned handwriting and printing on documents
California Department of Justice (cont.)	DNA Laboratory
	Collects, documents, and submits biological samples of unidentified remains and samples from family members or personal articles of a missing person for DNA analysis
	Provides FAC staff and computerized mass fatality DNA sample submission tracking system
	Provides media support to Coroner/Medical Examiner to address questions regarding DNA methods used to identify victims
California Department of Motor Vehicles	Assists in identification of deceased by providing photographs, thumbprints, and other identifying information captured in driver license records and vehicle/vessel records
	Information Service Branch
	Provides support for the identification of human remains through a search of license plate numbers, VIN numbers, and vehicle makes, models, year
	Provides all names of individuals residing at a specific address
	Provides cross-reference of driver's name and driver's license number between a registered owner and a vehicle registration
	Registration Automation Development Section
	Provides vehicle description and information pertaining to a specific name or specific address
	Provides information regarding all inquiries, updates, requests, and responses from all

Table 3-3. State agencies with mass fatality responsibilities.

State Agency	Responsibilities
	journal tapes
California Military Department/ California National Guard	Provides personnel and equipment support to local authorities to collect, identify, transport, and store the deceased
	Assists with protection of life and property
	Conducts search and rescue
	Assists with general logistics
California Department of General Services	Assists in the procurement of needed facilities, materials, supplies, and equipment necessary to support mass fatality management operations
	Maintains list of State facilities and their potential uses to meet emergency requirements and prepares facility plans in coordination with Cal EMA
	Maintains list of qualified contractors and source equipment, other than heavy engineering contractors and equipment
	Develops contingency contracts for procurement of services, materials, and supplies

Cal EMA = California Emergency Management Agency

EMAC = Emergency Management Assistance Compact

Table 3-4. Federal agencies with mass fatality responsibilities.

Federal Agency	Responsibilities
Agency for International Development, Office of Foreign Disaster Assistance	Assists in the processing of deceased foreign nationals by contacting the deceased foreigner's family through the appropriate embassy
Emergency Management Assistance Compact	Administered by the National Emergency Management Association
	Stipulates that licenses, certifications, and permits recognized by the assisting State are recognized by the receiving State, subject to limitations and conditions prescribed by the Governor's executive order
	Member States
	Develop an emergency plan and procedures for managing and provisioning assistance
	Protect and ensure uninterrupted delivery of services; medicines; water; food; energy and fuel; search and rescue; and critical lifeline equipment, services, and resources
	Inventory and set procedures for interstate loan and delivery of human and material resources, including procedures for reimbursement or forgiveness
Environmental Protection Agency	Provides technical assistance and environmental information
	Performs environmental assessments when processing chemically contaminated remains
National Transportation Safety Board's Office of Transportation Disaster Assistance	Integrates Federal resources with those of local and State authorities and airlines to meet the needs of aviation disaster victims and their families
	Provides family/victim support coordination, FACs, forensic services communication with foreign governments and interagency coordination between communities and commercial carriers
U.S. Department of Defense	Provides technical assistance teams to assist with the following: – Assistance for human remains processing, including identification – Information regarding chemical agents and their associated risks – Hazardous materials expertise and agent detection and identification – Nonrefrigeration transportation assets
	Office of the Armed Forces Medical Examiner
	Serves the Army, Navy, and Air Force
	Joint Task Force-Civil Support
	Supports consequence management response efforts
U.S. Department of Defense (cont.)	54th Quartermaster Company, 246th and the 311th
	Performs fatality management operations when requested

Table 3-4. Federal agencies with mass fatality responsibilities.

Federal Agency	Responsibilities
U.S. Department of Health and Human Services	Serves as the Federal ESF#8 lead with oversight of all Federal ESF #8 activities
	Deploys ESF #8 personnel appropriate to the response requirements, which may include Regional Emergency Coordinators, Subject matter Experts, and Incident Response Coordination Teams, and DMORTs to support ESF #8 requests and missions
	Requests ESF #8 partners to activate and deploy health and medical personnel, equipment, and supplies in response to requests for Federal public health and medical equipment
	Coordinates with primary and supporting departments, agencies, and governments throughout the incident including sending Liaison Officers, when appropriate
	National Disaster Medical System (NDMS)
	Provides medical mutual-aid resources
	Disaster Mortuary Operational Response Team (DMORT)
	Operates Regional Incident Morgue(s) and/or supports county Coroner/Medical Examiner Morgue operations
	Assists in the organization and operation of the FAC
	Capable of decontaminating chemically contaminated remains and monitoring the remains' level of contamination
	Disaster Medical Assistance Team (DMAT)
	Provides the triage of patients, providing high-quality medical care despite the adverse and austere environment often found at a disaster site, patient reception at staging facilities and preparing patients for evacuation
	Can support the Coroner/Medical Examiner by evaluating Coroner/Medical Examiner personnel who enter and exit a disaster site
	Can assist the Coroner/Medical Examiner prepare for decontaminating chemically contaminated remains by providing decontamination equipment and consultation
	Centers for Disease Control and Prevention
	Diagnoses biological agents
	Provides bio-safety and infection control information in cases involving biologically contaminated remains
	Provides laboratory support for evidence analysis
U.S. Department of Homeland Security	Implements the National Response Framework
	Serves as the lead agency for consequence management of mass fatality event
U.S. Department of Homeland Security (cont.)	FEMA
	Coordinates Presidential Disaster Declaration
	Implements the Public Assistance Program with Cal EMA to reimburse local and State government agencies for mass fatality operations
	Mobilizes Federal resources to the disaster area
	Urban Search & Rescue Response System
	Supports recovery of the deceased
	Identifies probable locations of remains
	Provides advice and assistance in handling and disposing of radiologically contaminated remains
U.S. Department of Justice, Office of Justice Programs, Office for Victim Assistance	Coordinates assistance to victims of terrorism, criminal aviation disasters, and other mass casualty Federal crimes on behalf of the FBI
U.S. Department of Transportation	Arranges for transportation including air, rail, marine, and motor vehicle
	Provides refrigerated transportation assets to be used as temporary storage units.
U.S. Department of Veteran Affairs	Assists in managing human remains, including victim identification and disposition
	Provides small contingent of non-mortuary affairs assets such as dentists and

Table 3-4. Federal agencies with mass fatality responsibilities.

Federal Agency	Responsibilities
	radiologists
	Potential use of Veteran Affairs cemeteries
	Assists in preparing new areas as cemeteries

Cal EMA = California Emergency Management Agency
DMORT = Disaster Mortuary Operational Response Team
ESF = Emergency Support Function
FAC = Family Assistance Center
FBI = Federal Bureau of Investigation
FEMA = Federal Emergency Management Agency

Table 3-5. Nongovernmental organizations and private-sector entities with mass fatality responsibilities

Nongovernmental Organization / Private-Sector Entity	Responsibilities
American Red Cross	Sets up and manages the delivery of services at the FAC as directed by the Coroner/Medical Examiner
	Provides mental health professionals
	Provides additional services such as family escorts, hotline, interpretation and translation, childcare, coordination of therapy dogs, supervision of dining areas, and public affairs.
	Assists with the planning of memorial services
California State Coroners' Association	Coordinates with law enforcement and the Cal EMA Law Enforcement Branch
	Activates and facilitates operations of the Coroners' Mutual Aid Plan
	Assists in information exchange, provide expertise, training and disaster preparation
California Dental Identification Team	Conducts dental identification of deceased persons who cannot be identified by other means
	Serves at the pleasure of the Coroner/Medical Examiner and support the forensic odontologist that serves the area
California Funeral Directors Association	Facilitates and provides local embalmers and funeral directors to local, State, and Federal agencies for human remains recovery, transportation, and preservation of human remains, support at Family Assistance Centers and final disposition or repatriation through Cal EMA
California Law Enforcement Chaplains Association	Expedites the coordinated response of trained law enforcement chaplains during times of major disasters and/or time of need.
	Maintains a partnership with the International Conference of Police Chaplains
California State Sheriffs' Association	Provides a liaison to Cal EMA and the California State Coroners' Association
Death Care Industry (funeral homes, crematoriums, and cemeteries)	Assists with morgue operations which may include the following:
	Collects antemortem data
	Discusses final disposition options
	Staffs FACs
Interpol	Identifies victims and their loved ones around the world
International Critical Incident Stress Foundation, Inc.	Provides Critical Incident Stress consultation to first responders on scene and post deployment.
Healthcare facilities (e.g., hospitals, nursing homes, assisted living)	Notifies Coroner/Medical Examiner on the number of fatalities being temporarily stored at the facility
	Expands human remains storage capacity to accommodate the increase surge of fatalities
	Notifies the Operational Area EOC or appropriate DOC when human remains storage capacity has been exceeded
	Coordinate with Vital Records to have a sub-registrar assigned to hospitals
Human Remains Removal Service	Removes remains from scene as directed by the Coroner/Medical Examiner
	Transports remains to the location designated by the Coroner/Medical Examiner
	Hospitals and private citizens may also contract to receive services
Salvation Army	Assists in the delivery of services at the FAC as directed by the Coroner/Medical Examiner
	Provides personnel to support FAC operations
	Provides food services

Cal EMA = California Emergency Management Agency

DOC = department operations center

EOC = Emergency Operations Center

ALTERED STANDARDS of DEATH CARE

Table of Contents

List of Tables

Normal versus Altered Standards of Death Care

1 Introduction

The mass fatalities resulting from catastrophic events such as earthquakes; chemical, biological, radiological, nuclear, or high-yield explosive (CBRNE) incidents; and pandemic influenza may make it extremely difficult to provide Normal Standards of Death Care effectively and in a timely manner. Altered Standards of Death Care may need to be implemented, based on consideration of the following factors:

- Need to manage a high number of fatalities
- Inability to effectively respond because of overwhelmed response capabilities
- Inability to surge the capabilities because of limited access to resources for extended periods

Implementing Altered Standards of Death Care is likely to be controversial. Communities should be engaged in pre-event planning and be made aware of the potential for the need to implement Altered Standards of Death Care after a catastrophic event. Effective pre- and post-event communication with local communities through religious, cultural, and other community leaders about Altered Standards of Death Care is important. Post-event, Family Assistance Centers are likely to be a key forum for community engagement and communications about Altered Standards of Death Care. Community leaders can be asked to facilitate such communications.

Establishing a regional governmental consensus on the need for implementing selected Altered Standards of Death Care uniformly in the region is critical. Uneven implementation is likely to compound the controversy. The regional decision-making process should be based on pre-event planning and acceptance of regional-level Memoranda of Understanding among the 12 Bay Area Operational Areas and their communities. The decision-making process is likely to need to include consideration of the following assumptions about response to the event:

1. Local and State officials seek a waiver of selective regulatory codes/statutes pertaining to day-to-day Coroner/Medical Examiner operations to allow for effective and timely mass fatality management.
2. The Governor issues, amends, and rescinds Executive Orders, proclamations, or statutes to deal with the final disposition of human remains.
3. The State may establish a standard method of final disposition by issuing an Executive Order or by other legal means.

The Altered Standards of Death Care that may need to be implemented after a catastrophic earthquake or catastrophic CBRNE incident are listed in **Table A** and after a pandemic influenza in **Table B**. Altered standards are discussed in the remainder of this appendix.

Table A. Normal Standards of Death Care versus the Altered Standards of Death Care that may be required after a catastrophic earthquake or catastrophic CBRNE incident.

Normal Standard of Death Care	Altered Standard of Death Care
Refrigerated storage of human remains	Nonrefrigerated storage of human remains
Investigation and positive identification	Delayed or limited positive identification of the deceased
Investigation for cause and manner of death	Delayed or limited examinations or autopsies

Table B. Normal Standards of Death Care versus the Altered Standards of Death Care that may be required after a pandemic influenza.

Normal Standard of Death Care	Altered Standard of Death Care
Immediate recovery of the deceased	Delayed recovery of the deceased
Preparation of the body by professionals	Preparation of the body by nonprofessionals or family
Refrigerated storage of human remains	Nonrefrigerated storage of human remains or temporary interment
Full examination or autopsy	Delayed and/or limited examinations or autopsies
Timely memorial or funeral service	Delayed or absent memorial or funeral service
Family assistance support and services	Virtual or limited family assistance support
Voluntary individual cremation	Involuntary mass cremation

2 Delayed Recovery of the Deceased

Recovery of the deceased may be delayed because of the high number of fatalities that occur in a relatively short period, over a widespread area geographically, and the limited Coroner/Medical Examiner resources to recover the deceased. The urgency to recover the deceased may be slightly mitigated by the fact that most of the deceased are not visible in public spaces. Most of the deceased are in hospitals, private residences, businesses, nursing homes, and alternative care sites.

The local Coroner/Medical Examiner needs to issue directives to hospitals, businesses, nursing homes, alternative care facilities, and the public to implement measures to accommodate delays in the recovery of the deceased. Hospitals are required to surge cold-storage capacities to store the deceased for extended periods. The public is likely to need to transport their deceased to designated fatality collection points, which results in delays

in the remains recovery process. Local Coroners/Medical Examiners need to coordinate with the hospitals in arranging for recovery of remains from hospitals.

3 Preparation of the Body by Nonprofessionals or Family

Between 50 and 75 percent of influenza-related deaths occur outside a hospital or medical treatment facility, with a significant number in private residences. Given the likely delay in recovering the deceased, the large number of deceased, and the limited professional resources to prepare the bodies for processing, nonprofessionals and family members are likely to be required to do so. Local Coroners/Medical Examiners need to issue directives to the public on the procedures to prepare bodies for processing. Appropriate legal waivers need to be obtained to implement the measures.

4 Non-refrigerated Storage of Human Remains

Ideally, human remains are cold-stored between pre- and post-morgue examination and until final disposition. Refrigerating human remains can prevent or significantly slow down tissue degradation, affording additional time for time-critical human remains processing tasks. Temporarily refrigerated storage options include refrigerated trucks, railroad cars, and tents. Additionally, internally or externally air-conditioned small buildings or rooms that can maintain a temperature of 37 degrees Fahrenheit or less may also be considered for cold storage.

However, needed cold-storage units and capacities may not be available in a timely manner. Local county morgue cold-storage capacities are inadequate for the high number of human remains. The supply of refrigerated trucks does not meet the demand, making it difficult to ensure proper storage/transportation for the deceased. Additionally, in the earthquake scenario, loss of power or the lack of generators/fuel affects the ability to cold-store human remains. Also, pre-designated cold-storage facilities may be structurally compromised in the earthquake scenario, further affecting cold-storage capacities.

Accordingly, nonrefrigerated storage of human remains may be necessary where and when cold-storage options are unavailable. Nonrefrigerated storage of human remains for long periods results in added challenges to processing because the remains begin to decompose. When high numbers of human remains cannot be transported from the incident site in a timely manner and storage sites and/or storage capacity are inadequate, the option to bag and temporarily inter human remains can be considered until arrangements for requisite transportation and storage needs are made. Also, in certain situations, embalming may be considered if and when embalming resources are available. Embalmed remains can be stored for up to 3 weeks without refrigeration, although they are preferably stored in a cool place.

5 Delayed or Limited Positive Identification of the Deceased

The availability of sufficient cold-storage capacities for human remains may allow for delays in conducting positive identification of the deceased. However, the lack of adequate cold-storage capacities for human remains and the need to process a high number of fatalities over a relatively short period with limited resources may compel

Coroners/Medical Examiners to conduct limited positive identification of the deceased. The likelihood of needing to process fragmented human remains in the catastrophic earthquake scenario adds to the overall remains identification burden, straining limited resources for the processing of remains.

6 Delayed or Limited Examination or Autopsy

The large number of deceased is likely to result in delayed, limited, or no examinations/autopsies of the deceased to enable timely and effective mass fatality management. The availability of sufficient cold-storage capacities for human remains may allow for delays in conducting examination/autopsies of the deceased. However, the lack of adequate cold-storage capacities for human remains, and the need to process a large volume of the deceased within a relatively short period with limited equipment and personnel resources is likely to necessitate limited or no examinations/autopsies of the deceased.

The deceased need to be screened for suspicious deaths and/or deaths that are readily apparent as non-incident-related. After that, a limited or no-examination/autopsy approach could be implemented by generally ascertaining whether all apparent evidence indicates death caused by the incident. Coroners/Medical Examiners accordingly need to apply professional discretion to determine which human remains require full examinations/autopsies. Because this approach is a departure from standard protocols, appropriate legal waivers/authorizations need to be obtained to implement the respective measures.

7 Delayed or No Memorial or Funeral Service

The pandemic influenza scenario requires public health departments to implement social distancing measures such as the suspension of mass gatherings for memorial/funeral rituals. Accordingly, memorial or funeral services have to either be delayed or not be held.

8 Virtual or Limited Family Assistance Support

The pandemic influenza scenario requires public health departments to direct the implementation of social distancing measures such as the provision of family assistance services via virtual centers. Coroners/Medical Examiners or their designees need to develop virtual systems to provide family assistance services, which consist of pushing information out, rather than pulling people into a facility. The capability to provide family assistance services via virtual centers is to be developed before the scenario event occurs.

9 Involuntary Mass Cremation

The combined lack of cold-storage capacities for human remains and the inability of Coroners/Medical Examiners to process the overwhelming number of human remains in a timely manner are likely to necessitate a standard final disposition solution to effectively manage the large number of deceased and minimize/avoid creating public health hazards. In such circumstances, the Governor is likely to issue, amend, or rescind Executive Orders, proclamations, or statutes to deal with the disposition of human remains, and the

State may establish a standard method of final disposition by issuing an Executive Order or by other legal means. Involuntary mass cremation is typically the recommended final disposition option for pandemic influenza mass fatality scenarios and has to be conducted in accordance to Governor/State-issued directives.

10 Temporary Interment

Temporary interment is a process in which the deceased are stored in individual plots at a large State-sponsored location until the response allows for the legal next of kin to disinter the deceased in preparation for final disposition. Temporary interments may or may not be temporary based on the next of kin's decision for final disposition after the emergency has subsided. The site should be managed by a combination of regular cemetery management staff and county resources reporting to the Coroner/Medical Examiner.

Temporary interment sites are limited to as few as possible. In the event of the need for temporary interment, complete identification of the remains is conducted. The exact location of each body buried is recorded on grid maps including dates and times, and each burial site is marked with identification numbers for orderly disinterment. The use of a global positioning system is to be used to identify the location of the deceased to allow for rapid excavation and burial as well as disinterment if requested by the next of kin after the event is over.

Selected cemetery sites meet the following criteria:

- Municipal nonsectarian cemetery or regulated by the California Department of Consumer Affairs, Cemetery and Funeral Bureau
- Capable of delivering services 7 days a week, 12 months a year
- Administrative staff support 24 hours per day
- Multiple layers of administrative and maintenance staff that can be accessed 24 hours a day
- Roadways, preferably paved or gravel, and entrances are wide enough to allow access for tractor trailers, refrigerator trailers, and excavators
- Not in public view and secured by a fence and security personnel
- Accurate survey of all cemetery grounds, developed and undeveloped
- Ability to survey additional burial spaces, record spaces, and complete burials quickly and accurately
- Acceptable communications systems in place including phones, fax machines, computers, and internet

Disinterment considerations include the following:

- Next of kin make choices about disposition of their loved one and incur the financial responsibility for services provided.

- Once the State or county restrains the next of kin's choice for final disposition, the State or county that is responsible for limiting freedom of choice incurs the financial responsibility for disinterment costs.
- If a decedent with a prepaid irrevocable trust is not disinterred, the county may claim the funds.

Agency and Resource Support

This section describes the resources that are available within the Operational Areas and resources that are potentially available from other agencies to support mass fatality management operations. Coroner/Medical Examiner resources are requested through the Coroner/Medical Examiner Mutual Aid System as shown in **Figure 5-1**.

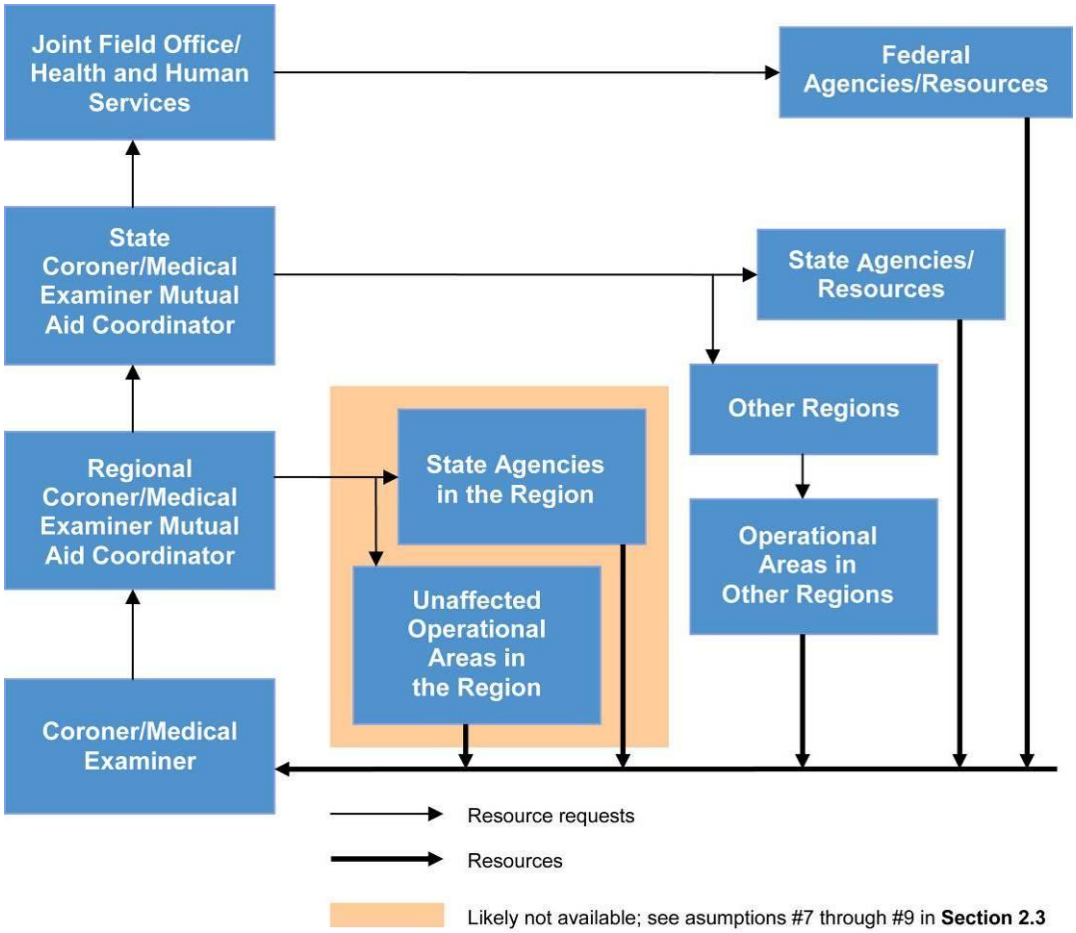


Figure 5-1. Coroner/Medical Examiner Mutual Aid resource request flow.

5.2.1 Local Resources

The following items are identified in the 2008 Chemical, Biological, Radiological, Nuclear, and Explosive (CBRNE) Capability Assessment and Strategic Plan prepared for the Bay Area Urban Area Security Initiative as resources that each Operational Area should have as part of their mass fatality response inventory:

- Refrigerated Bobtail transport vehicle
- Fifth wheel trailer/equipment carrier
- Body bags (medium-heavy, universal large size)
- Personal protective equipment (PPE) Caches (level C&D) (100 people/cache)
- Litters (combo: collapsible, rigid & single wheeled)

- Small portable morgue refrigerated tent (60-person capacity)
- Large portable morgue refrigerated tent (200-person capacity)
- Staff tent
- Coroner recovery team (4 persons to move and 1 person to scribe)
- Bio-seal units (10 rolls and 6 sealers)
- Dedicated mobile command center
- John Deere Gator

It is not assumed that each Operational Area in the region has acquired these items since the CBRNE Capability Assessment and Strategic Plan identified some gaps in the list. Because many jurisdictions still lack some of these resources and because of the high number of deceased resulting from the earthquake, it is assumed that State and Federal resources are needed to respond effectively.

5.2.2 State Resources

State resources that can be requested through the Cal EMA State Level include the following:

- California Department of Justice (DOJ) Missing/Unidentified Persons Section
- California DOJ Bureau of Forensic Services
- California Department of Motor Vehicles
- California Military Department/California National Guard
- California Dental Identification Team

The roles of these agency resources are described in **Section 3.3**.

5.2.3 Federal Resources

Federal mass fatality resources that may be requested by Cal EMA State Level on behalf of the region and Operational Areas include the following:

Under ESF #8, the Federal Government may provide assistance for mass fatality operations through the deployment of DMORTs. DMORTs are composed of funeral directors, medical examiners, coroners, pathologists, forensic anthropologists, medical records technicians and transcribers, fingerprint specialists, forensic odontologists, dental assistants, x-ray technicians, mental health specialists, computer professionals, administrative support staff, and security and investigative personnel. During a response, DMORTs work under the guidance and activation of local authorities, and can provide support for:

- Temporary morgue facilities
- Victim identification
- Forensic dental pathology
- Forensic anthropology methods

- Processing, preparation, and disposition of remains

The Department of Health and Human Services also maintains three Logistics Response Assistance Teams (LRATs). The LRATs consist of logistics personnel from throughout the National Disaster Medical System (NDMS). LRAT teams are responsible for maintaining and deploying the equipment caches for all NDMS teams including DMORT, Disaster Medical Assistance Team and the Veterinary teams.

5.2.4 Private-Sector Resources

The private-sector plays a critical role in the offering of supplies, equipment, and facilities. The Coroner/Medical Examiner needs to reach out to the private sector through the Logistics Branch of the Operational Area EOC. It is recommended that agreements for the acquisition of privet-sector resources be made prior to a catastrophic event.

The private-sector is expected to provide the following resources:

- Refrigerated storage (mobile and fixed units)
- Wooden caskets
- Body bags
- Morgue supplies
- Facilities for additional morgues (Regional Incident Morgue and Fatality Collection Points)

5.2.5 Integration of Resources

Resources from Operational Areas in other Regions, the State, EMAC and the Federal government are allocated to requesting Operational Area through the Cal EMA Regional Level Law Enforcement Branch per established SEMS protocol.

When outside resources have been allocated to support Operational Areas in the Region, in most cases those resources fall under the command of the requesting jurisdiction. When State or Federal teams are allocated and deployed to the Operation Area they function independently while coordinating their operations with each Operational Area they are supporting.

When military resources are deployed, a military liaison co-locates with the Incident Commander at the Incident Command Post. Military support at all times remains under the military chain of command.

The DMORTs operate the Regional Incident Morgues under the jurisdiction of the Coroners/Medical Examiners that have transported human remains to the facility. Each Coroner/Medical Examiner keeps jurisdiction over the fatalities that occur within their county but does not direct the Regional Incident Morgue operations.

With the over 7000 fatalities spread out among the 12 Bay Area counties, the likelihood of an Operational Area receiving dedicated support from their own DMORT is low. If the

number of fatalities in an Operational Area greatly exceeds the fatality numbers in other Bay Area counties then that Operational Area may receive their own DMORT.

When A DMORT is allocated to support a specific Operational Area, the DMORT integrates into the Incident Command System under the county Coroner/Medical Examiner.

OPERATIONAL PHASES DETAIL

5.3 Fatality Operations

The management of human remains during a mass fatality event typically includes eight operational phases and an additional end-phase involving demobilization. The objective of this section is to illustrate the various fatality management phases and detail the key fatality operations elements inherent in each phase. **Figure 5-2** presents the phases and operational elements of mass fatality management.

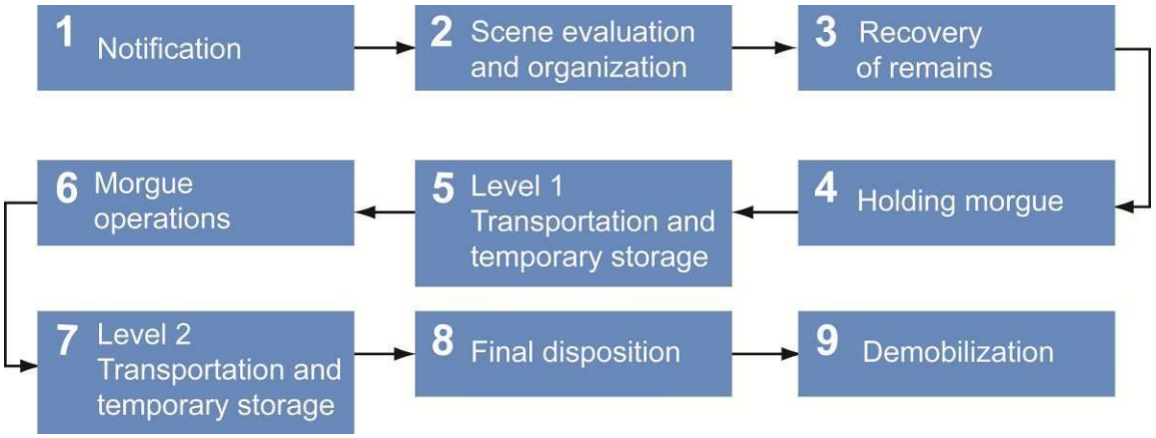


Figure 5-2. Fatality management flow chart.

The Coroner/Medical Examiner is the lead for all morgue operations, and in many instances, is part of law enforcement. Major Coroner/Medical Examiner activities include:

- Search and recovery of the deceased
- Incident site documentation
- Collection of human remains and personal effects
- Transport of human remains to the county morgue or Regional Incident Morgue
- Medicolegal death investigation
- Establishment of county temporary morgues or Regional Incident Morgue stations
- Positive identification of human remains, when possible
- Release of the decedent and associated personal effects
- Antemortem information collection
- FAC operations

5.3.1 Phase 1: Notification

Disaster notification to the Coroner/Medical Examiner is typically routed through routine law enforcement, emergency operations center channels, or news media broadcasts in advance of a request to transport human remains. In rare cases, it is possible that the Coroner/Medical Examiner would be the first to recognize a cause of death indicating a

potential weapon of mass destruction (WMD) release. In such an event, the Coroner/Medical Examiner is the one to initiate notification of appropriate authorities. To obtain supplemental resources, the first step is for the Coroner/Medical Examiner to notify the Operational Area Emergency Operations Center.

Once notified, the Coroner/Medical Examiner gathers as much information as possible about the incident. The Coroner/Medical Examiner identifies the Incident Commander and the level of involvement from other agencies, and how the incident is managed.

When a Coroner/Medical Examiner is notified of a mass fatality incident, notification should include the following information:

- Type of incident
- Location
- Estimated number of fatalities
- Condition of the human remains
- Demographics of those killed
- Ongoing response actions
- Response agencies currently on-scene or en route

To establish an on-scene incident command structure, Coroner/Medical Examiner staff is recalled upon immediate notification of a mass fatality incident. Staff members may be full-time, volunteers, or part of another agency. Examples of key staff are:

- Chief or lead investigator
- Forensic pathologist
- Office administrator
- Logistics chief
- Senior morgue technician
- Public Information Officer

5.3.2 Phase 2: Scene Evaluation and Organization

The primary role of the Coroner/Medical Examiner is to determine the most effective and efficient approach for managing human remains. This determination is greatly influenced by the initial situation assessment reported by the Coroner/Medical Examiner Scene Evaluation team. A County Coroner/Medical Examiner Initial Start-up form is provided in **Appendix D**.

Upon arrival at the incident scene, the Coroner/Medical Examiner:

- Meets with current Incident Commander and receives a status briefing
- Observes the incident site
- Observes the surrounding area

The Coroner/Medical Examiner considers the answers to the following questions to determine how to assist with the collection of scene data and management of remains:

- Is the incident stabilized? If not, when is it expected to be stabilized?
- When are the building(s) going to be safe enough to begin search and recovery operations?
- Are all the remains to be recovered at once or over several days or weeks?

The answers to the following questions provide information on how long the Coroner/Medical Examiner has to establish mass fatality management operations:

- What is the estimated number of fatalities? The estimate helps the Coroner/Medical Examiner determine the number of antemortem identification records required and assists in determining the need and extent of mutual aid.
- What are the conditions of the deceased? The Coroner/Medical Examiner should view several human remains to understand their condition (e.g., viewable, intact remains, fragments, or aerosolized). The condition of the remains is the most important factor in determining the response operations strategy.
- Have the human remains been moved, and if so, where? This information assists the Coroner/Medical Examiner establish recovery parameters and consider the establishment of a temporary morgue or participation in a Regional Incident Morgue.

The Coroner/Medical Examiner remains on-scene until the mass fatality management operation is established to ensure the incident response follows protocol. The Coroner/Medical Examiner provides guidance to the current Incident Commander, assigns team leaders and other positions, and distributes incident priorities and objectives to staff. The Coroner/Medical Examiner is not in charge of specific response areas but focuses on the overall mass fatality management. **Table 5-1** presents critical mass fatality management operations positions and the potential daily position crosswalk.

Table 5-1. Coroner/Medical Examiner mass fatality incident operations assignments.

Operation	Personnel Assignment
Incident morgue	Senior morgue administrator
Search and recovery	Senior death investigator
Family Assistance Center	Senior victim services coordinator or advocate
Media	Public Information Officer, next-senior morgue administrator
Logistical	Senior supply and budget manager
Personal effects	Senior evidence technician

Most Coroners/Medical Examiners normally do not have enough staff to fill all positions, but personnel in the local jurisdiction and Coroner's Mutual Aid System can be used to fill critical position assignments.

A Coroner/Medical Examiner Operations Section sample organizational chart is provided in **Appendix D**.

5.3.3 Phase 3: Recovery of Remains

The Coroner/Medical Examiner is in charge of human remains recovery after the earthquake. The search for human remains and personal effects occurs as part of the search for live victims. Urban Search and Rescue (USAR) teams go from building to building and through building debris searching for people needing rescue. As the teams locate fatalities, they document the discovery and communicate the location information to Incident Command.

5.3.3.1 Initial Site Assessment

The following actions should take place prior to any search and recovery operation:

- **Document the entire scene**. The entire scene should be photographed using both still and video cameras. Black and white film must be used. Black and white film is specified for litigation purposes; color photos can be considered too shocking for members of a jury.
- **Establish perimeters**. Initial boundaries and perimeters should be established several hundred yards away from the specified impact zone.
- **Assessment of hazards**. The search and recovery leader should meet with the Incident Commander, fire, and hazardous materials personnel to identify and assess scene hazards and the actions that are needed to mitigate the hazards.

Potential hazards for the Coroner/Medical Examiner Search and Recovery teams:

- Bloodborne pathogens
- Hazardous materials
- Unstable debris and structures
- Harmful animals

5.3.3.2 Search and Rescue or Recovery Resources

The following groups are involved in search and recovery operations:

- USAR
- Sworn law enforcement
- Fire department (structural recoveries)
- Funeral directors
- Military
- Volunteer SAR teams
- Cadaver/body dog teams

5.3.3.3 Coroner/Medical Examiner Search and Recovery Team Positions

The Coroner/Medical Examiner Search and Recovery Teams include people in the following positions:

- **Death Investigator/Team Leader**. Responsible for the search and recovery team, assigning positions, ensuring all needed equipment is available and procedures are followed. Understands OSHA requirements.
- **Team Scribe**. Responsible for issuing case numbers.
- **Search Team Photographer**. Responsible for photographing each body or fragment before and after a case-number tag has been affixed or placed next to it.
- **Searchers**. Responsible for locating human remains, fragments, and personal effects; marking each site with a flag or paint with an assigned case number; placing a tag with case number on the human remains, fragments, and personal effects; placing the remains into a human remains pouch; and marking the human remains pouch with the assigned case number.
- **Recovery Personnel**. Assist with placing the human remains, fragments, and personal effects into the human remains pouches and carrying the litters to the recovery staging area.

5.3.3.4 Search and Recovery Equipment

Basic search and recovery equipment includes personal protective equipment, litters, human remains pouches, various pin flags, various colors of spray paint, tags, writing supplies, radios, and plastic bags of various sizes for personal effects.

5.3.3.5 Search and Recovery Sequence

Coroner/Medical Examiner Search and Recovery teams follow up on the fatality discoveries made by the USAR teams, by reviewing the GPS information and/or building markings. When human remains are located, the Coroner/Medical Examiner oversees their recovery with the goal of establishing a confirmed identification for each decedent and identifying the cause of death.

For locations where victims are not expected to be alive, and therefore have not undergone a search for live victims, the Coroner/Medical Examiner Search and Recovery team leads determine the most appropriate search strategy/pattern to be used. Searches must be systematic and comprehensive, with the goal of removing all human remain, fragments, and personal effects at the incident site.

The sequence of activities they perform is as follows.

- Identify buildings or structures where fatalities are present
- Locate human remains and personal effects
- Write the case number on one tag
- Photograph human remains, fragments, or personal effects
- Attach tag to body, fragment, or personal effect

- Re-photograph human remains, fragment, or personal effects
- Spray paint the case number on the ground near the remains or personal effect
- Record the information on the log
- Place recovered items in the human remains pouch or plastic bag
- Write the case number on the human remains pouch or plastic bag
- Place the human remains pouch or plastic bag on a litter
- Move the litter to the Recovery Staging Area in preparation for transport to the Regional Incident Morgue or county morgue
- Re-photograph the area
- Continue with the search

5.3.3.6 Searching Collapsed Buildings

Remains are often extremely difficult to recover, and those conducting the search and recovery operation are often at risk of serious injury from falling or unstable debris. A plan of the building or buildings to be searched should be acquired. If such plans do not exist, they may be developed from interviews with people familiar with the structure.

Survivors of the building collapse should be interviewed to determine the *usual* pre-incident location and the last *known* pre-incident location of each known or potential victim.

An engineer should superimpose the remaining structure onto the floor plan to provide an image of the building as it currently exists, number the remaining major support beams or walls, and place the corresponding number on the floor plan and beams or walls.

Search and recovery can then begin. Search and recovery can start from the top and bottom of the structure at the same time.

5.3.3.7 Recovery Staging Area

The remains, fragments, and personal effects are staged for movement to Regional Incident Morgue or county morgue. Transport can be accomplished by:

- Individual removal in cars or small trucks
- Group removal in a refrigerated trailer
  - Requires fewer transportation resources
  - Slows decomposition
  - May overload the morgue if not properly planned

Before human remains, fragments, and personal effects are moved, the following tasks should be accomplished:

- The case number on the human remains pouch should be checked against the case number attached to the human remains, fragment, or personal effects.

- A log should be maintained to record what human remains, fragments, and personal effects left the incident site, what transport vehicle was used (number or license), and the name of the vehicle operator.

5.3.3.8 Gridding

Gridding is the process of establishing the exact locations of human remains, fragments, and personal effects. Gridding helps to determine relationships, if any, among the items, when all items have been plotted. This can assist in the identification of the deceased. Gridding may not be necessary or useful in some situations after the earthquake because the remains are intact and easily located. Gridding is necessary when the human remains are mostly fragmented or are part of a large filed of debris.

Gridding is complete when the search and recovery operation is complete. The Coroner/Medical Examiner should ensure that the exact locations of the human remains, fragments, and personal effects are documented in a usable format.

More information about gridding is provided in **Appendix D.**

5.3.3.9 Infection Control

Human remains are generally not contagious after death, but a minimal risk is associated with viruses like the human immunodeficiency virus (HIV) and hepatitis B and C if universal infection control measures are not followed when handling human remains.

Standard precautions for infection control are the combination of PPE and procedures used to reduce transmission of all pathogens from moist body substances to personnel or patients. These precautions are driven by the nature of an interaction (e.g., possibility of splashing or potential of soiling garments) rather than the nature of a pathogen. In addition, transmission-based precautions are applied for known or suspected pathogens. Standard precautions include the following:

- Airborne precautions are used for pathogens that remain suspended in the air in the form of droplet nuclei that can transmit infection if inhaled.
- Droplet precautions are used for pathogens that are transmitted by large droplets traveling 3 to 6 feet (e.g., from sneezes or coughs) and are no longer transmitted after they fall to the ground.
- Contact precautions are used for pathogens that might be transmitted by contamination of environmental surfaces and equipment

All autopsies involve exposure to blood, a risk of being splashed or splattered, and a risk of percutaneous injury. The propensity of postmortem procedures to cause gross soiling of the immediate environment also requires use of effective containment strategies. All autopsies generate aerosols. Furthermore, postmortem procedures that require using devices (e.g., oscillating saws) that generate fine aerosols can create airborne particles that contain infectious pathogens not normally transmitted by the airborne route.

For autopsies, standard precautions typically include proper use of a surgical scrub suit, surgical cap, impervious gown or apron with full sleeve coverage, a form of eye protection (e.g., goggles, face shield), shoe covers, and double surgical gloves with an interposed layer of cut-proof synthetic mesh. Surgical masks protect the nose and mouth from splashes of bodily fluids (i.e., droplets >5 micrometers); the masks do not provide protection from airborne pathogens. Because of the fine aerosols generated at autopsy, autopsy workers should wear N-95 respirators, at a minimum, for all autopsies regardless of suspected or known pathogens. However, because of the generation of high-concentration aerosols by mechanical devices in the autopsy setting, powered air-purifying respirators (PAPRs) equipped with N-95 or P100 high-efficiency particulate air (HEPA) filters should be considered. Autopsy personnel who cannot wear N-95 respirators because of facial hair or other reasons should wear PAPRs.

5.3.4 Phase 4: Fatality Collection Point

Fatality collection points are key components in the strategy for managing a surge of decedents. The purpose of the fatality collection point is to provide short-term shelter, privacy, and security of human remains and associated evidence until transportation to the incident morgue is arranged.

Human remains, fragments, and personal effects are collected at the fatality collection point(s). The remains are sorted by potential ease of identification (intact bodies versus fragments) and verifying case number. Suspicious deaths are documented for further review at the incident morgue.

Drivers and various transportation modes, refrigerated trucks and vans, are assigned to transport the decedents and personal remains from the fatality collection points to temporary storage at the incident morgue. The fatality collection point(s) verify driver identification and log information regarding the driver, transport vehicle, and the decedents and personal effects.

5.3.5 Phase 5: Level 1 Transportation and Temporary Storage

Transportation and temporary storage is the movement of the decedent from the fatality collection point to the morgue. Personnel assigned to the transportation coordination should establish a schedule with Coroners/Medical Examiners or their designee for transfer of remains to the county morgue, temporary morgue, or regional incident morgue. Schedules should be arranged and operate on a 24 hour basis. State and Federal Department of Transportation (DOT) requirements must be satisfied for the transportation of human remains. Transportation across State lines requires approval of receiving State(s). Transportation across international lines (Canada and Mexico) may require State Department approval and the receiving nation's approval.

Operational areas have limited numbers of transport vehicles and personnel. Private remains removal services within the Bay Area region are typically small operations with 2 to 3 transport vehicles. Unmarked refrigerated trailers, if available, should be used for the transport of human remains to minimize the decomposition process.

Transportation logs should be maintained to ensure accountability of all remains. Procedures are as follows:

- Maintain a log sheet indicating the following:
  - Assigned body number for each decedent being transported
  - Number of remains being transported in the vehicle
  - License number of the transporting vehicle
  - Name of the driver of the transporting vehicle
  - Signature of the driver accepting responsibility for remains
  - Date and time vehicle leaves incident site for morgue
- Use enclosed professional funeral vehicles or refrigerated trailers.
- Do not stack remains.
- If refrigerated trailers are used, remove all company logos or names, if any.
- Determine the number of refrigerated trailers needed for transport (approximately 20 adult whole bodies per 40-foot trailer).
- Place vehicles in a secure area near the recovery point with easy access to load remains.
- Once bagged, tagged, and placed on a litter, the human remains, fragments, or personal effects are carried to the vehicle and loaded.
- Use sufficient personnel to carry each litter; 4 people are recommended.
- Ensure a Unit Leader is assigned to maintain the inventory of all remains stored in the refrigerated unit.
- Keep trailer doors are locked at all times when not in use.
- Provide the vehicle driver with a route; driver proceeds directly to the morgue with no deviations.
- Do not use ambulances to transport decedents.

5.3.5.1 Pre-examination Temporary Storage of Human Remains

During a mass fatality incident, human remains and personal effects may need to be stored for an extended period, until the Coroner/Medical Examiner is able to identify remains, determine cause and manner of death, and issue a death certificate.

When the human remains transport vehicle arrives at the specified morgue, the Receiving Station accepts the human remains, fragments, and/or personal effects; log arrival time and case number; creates a case file folder; and places the remains in initial temporary storage until all morgue stations are fully operational and/or not overloaded.

When a morgue station is capable of receiving human remains, fragments, and/or personal effects, the decedent is moved from temporary storage by an assigned escort that moves the decedent through each morgue station for processing.

5.3.6 Phase 6: Morgue Operations

The projected number of fatalities in the 12-county region from the earthquake is more than 7,000 (see **Table 2-1)**. Depending on the county, the Coroner/Medical Examiner is responsible for processing between 5 and 2,200 immediate fatalities, which, in most cases, drastically exceeds the fatality management capacity of the county. While some of the county fatality numbers presented may appear to be manageable, Coroners/Medical Examiners often have a diminished workforce and lack of resources. Realistically, managing incident-related fatalities and daily caseloads is likely to result in the county becoming overwhelmed.

The unique composition of the 12 counties considered in this Plan drive the need to present a variety of mass fatality management options with respect to morgue operations.

Each county should evaluate its capacity to manage the number and condition of the deceased in a timely and effective manner that meet legal requirements and minimize distress on the families of the deceased and the community. The evaluation process should include staff, facility, and resource capabilities. Day-to-day operations must be kept separate from the mass fatality incident-associated fatalities. Once the evaluation is complete, the Coroner/Medical Examiner decides how the county conducts incident-related morgue operations. Options include any of the following:

- Use the existing county morgue
- Establish and use a temporary morgue in the Operational Area
- Prepare, track and transport decedents to one of the three proposed Regional Incident Morgues in the Bay Area

The goals of morgue operations are to:

- Document the cause, manner, and mechanism of death
- Confirm identity of the deceased
- Provide a physical accounting for all deceased directly affected by the incident.
- Provide death notification, generate a death certificate, and release the deceased and associated personal effects to the next of kin for final disposition

Each station is responsible for updating status boards and updating case files for each decedent. **Figure 5-3** presents the morgue stations and process flow.

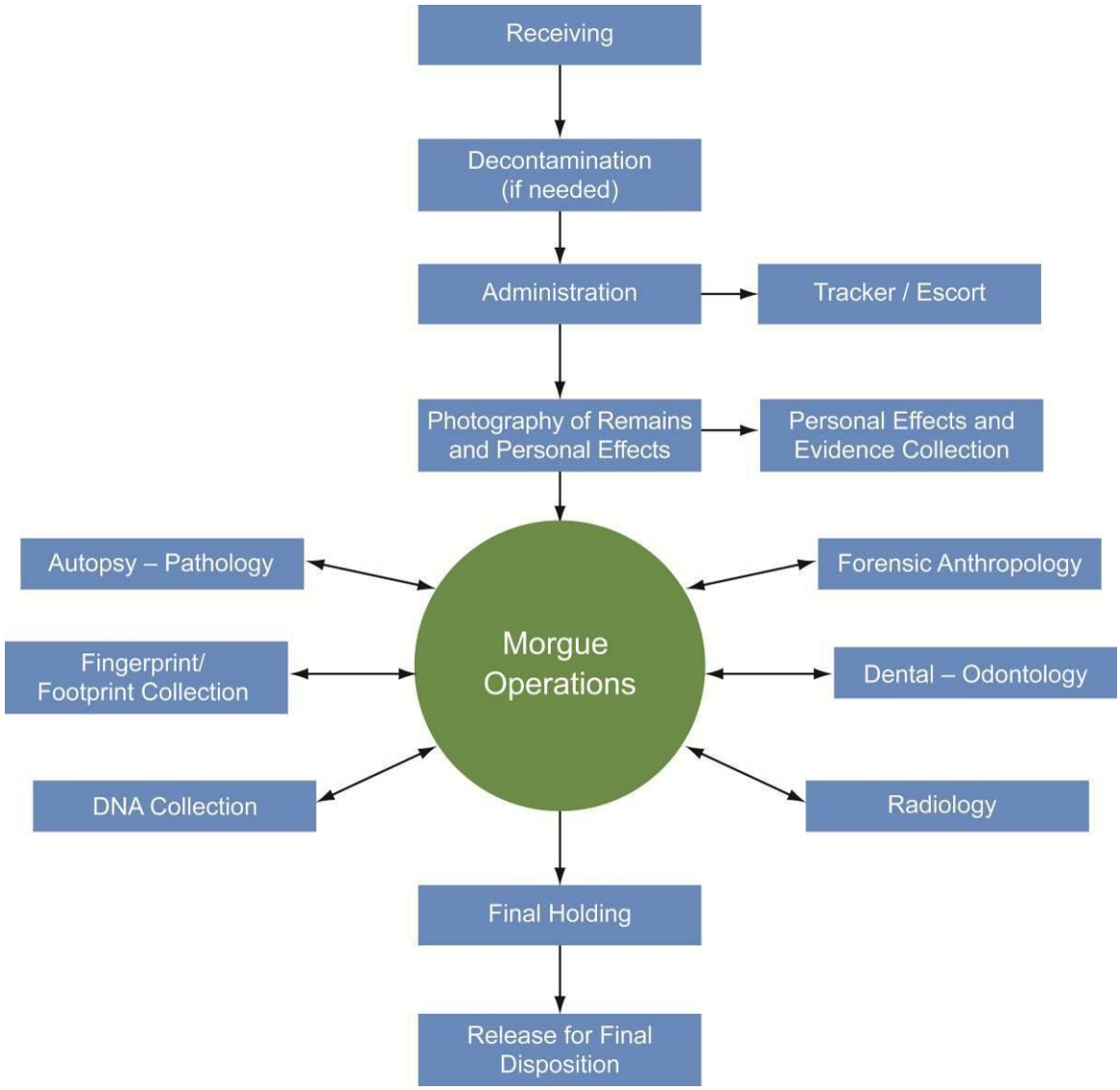


Figure 5-3. Human remains processing: Morgue operations.

Morgue operations are the most resource-intensive activity due to workforce requirements, logistical requirements, and emotional stress. Meticulous data management is an absolutely essential function of the morgue to confirm identification and ensure that the correct remains are released to the next of kin. The deceased must be treated with dignity and respect throughout this process.

Morgue operations begin with transportation of the human remains from the fatality collection point to the morgue, either county morgue, county temporary morgue, or the regional incident morgue.

A formal triage and examination process is followed when human remains are received at the morgue. This is referred to as the post-mortem process. At the end of this process, a detailed postmortem report is completed, which is used as part of the identification process.

An assigned escort stays with the decedent through each of the following mass fatality incident morgues including the following stations:

- Administration Station
  - Single point-of-contact for all morgue operations
  - All antemortem identification records are collected and collated
  - Case file management and administration
  - Status boards for tracking the status of human remains and fragments
- Receiving Station
  - Remains or personal effects are received
  - Case file, including case file number, is initiated
  - Remains are placed in temporary refrigerated holding or assigned an escort
  - Spiritual services are arranged for the decedent
- Decontamination Station (if needed)
  - Detailed decontamination of remains, fragments, and/or personal effects are performed
- Photography Station
  - Remains are photographed
- Personal Effects and Evidence Collection Station
  - Removal, inspection, and documentation of personal effects
  - Removal, inspection, and documentation of clothing
- Fingerprinting or Footprinting Station
  - Identification may be established
  - Prints of fingers or feet are taken
- Radiology Station
  - X-ray for foreign objects and teeth encapsulated in human tissue
- Dental – Odontology Station
  - Most common method of establishing a confirmed identification
  - Dentagram is performed
- Autopsy – Pathology Station
  - Remains are weighed
  - Detailed diagram of injury patterns, missing portions, and other artifacts is completed
  - Additional photographs are taken
  - Work at previous morgue stations is reviewed
  - Any external fluid samples are collected
  - A tissue sample, if needed, is collected

  - Human remains are placed into human remains pouches
  - Human remains are placed into human remains pouches
  - After the medicolegal autopsy or inspection is complete, the forensic pathologist, forensic anthropologist, and criminalist should make a determination as to the confirmed identification of the decedent.
- Forensic Anthropology Station
  - Assistance is provided in determining number of fatalities and gender, age, and race of decedent
  - Forensic anthropologist exam is performed
- DNA Station
  - DNA samples are collected
- Final Holding Station
  - Separate from the initial holding area
  - Files are returned to Administration Station
- Release Area Station
  - Physical location to stage remains for departure from the morgue
  - Legal next of kin's instructions for final disposition received
  - Case file folder is completed
  - Coroner/Medical Examiner signs the death certificate
  - Receiving funeral home or other party given the time the deceased will be released to the funeral home
  - Case file and written release are provided to station providing the case number, confirmed identification, name of receiving party, and time the remains are to be picked up
  - Identification of funeral director verified on arrival
  - Remains retrieved from the holding area
  - Case number verified on the human remains pouch, coffin, or shipping container
  - Receipt document signed by the receiving funeral director or other party

5.3.6.1 County Morgues

In addition to the event-related fatalities, Coroners/Medical Examiners are still required to manage their typical day-to-day case loads. County morgue personnel determine the cause of death and identify victims for return to the legal next of kin. It is critical to assess the full-surge operational capacities of the county morgue, in addition to the normal capacities.

If the Coroner/Medical Examiner determines that the numbers and conditions of the decedents do not overwhelm the existing morgue, the following actions are taken to better

manage the significant increase in case work, ensure accurate data management, and provide support to the community:

- Identify a staff person to serve as the point of contact for non-event-related existing cases and new arrivals
- Establish a separate area for non-event-related existing cases and new arrivals
- Use a color coding system for all mass fatality case files to identify the file easily, if misplaced

If the Coroner/Medical Examiner determines that the current facilities and day-to-day case load cannot bear the operational demands of the event-related fatalities, the Coroner/Medical Examiner needs to establish a temporary morgue in Operational Area or prepare to participate in the Regional Incident Morgue.

5.3.6.2 Temporary Incident Morgues

Temporary incident morgue operations augment Coroner/Medical Examiner mass fatality processing operations, provide a determination of the cause of death, and identify victims for return to the legal next of kin. Various facilities have been used as temporary incident morgues including aircraft hangars, large durable tents, and high-school gyms.

After assessing the impact of the earthquake, the Coroner/Medical Examiner should consider the following factors when considering the establishment of a temporary incident morgue in the Operational Area:

- Number of fatalities
- Current county capacity including cold storage, factoring in current non-incident-related caseload
- Potential for the county morgue to be expanded
- Availability of suitable facilities
- Ability to keep non-incident-related case load separate from incident-related caseload
- Ability to support the temporary morgue and provide personnel, security, and equipment
- Desired end state of operations
  - Confirmed identification and complete medicolegal autopsy
  - Attempt at establishing confirmed identification with autopsy sampling, as specified by law
- Factors to consider when designating a site for a temporary morgue:
  - Location
  - Compliance with OSHA regulations
  - Controlled access
  - Necessary square footage, water, sewer, electricity, and climate control

5.3.6.3 Site Selection

The Coroner/Medical Examiner identifies potential temporary morgue sites within the Operational Area prior to a mass fatality event. The following characteristics should be considered when establishing a temporary morgue site:

- Proximity to the greatest number of fatalities without impeding search operations (site should be out of the view of the public and media view to the extent possible)
- Sufficient space to accommodate the morgue stations
- Single story
- Sufficient electricity, water, waste disposal, ventilation, and lighting
- Ability to accommodate large vehicles and trailers
- Easily cleaned surfaces

5.3.6.4 Regional Incident Morgue(s)

During a mass fatality event, local jurisdictions may lack sufficient personnel, equipment, and storage capacity to handle significant numbers of deceased victims. Therefore, jurisdictions may depend on the federally supported Regional Incident Morgue(s). This section discusses the operations of these facilities, which are supported by Disaster Mortuary Operational Response Teams (DMORTS), associated equipment, and support personnel. DMORTs are activated immediately; however, their arrivals at the facilities take longer than 48 hours due to damage to infrastructure.

After a catastrophic disaster, the establishment of a Regional Incident Morgue to perform mass fatality management operations for the 12 Bay Area counties assists Coroners/Medical Examiners to increase regional mass fatality management capacity, expedite the return of the deceased to the legal next of kin, and reduce the negative impact on the recovery of the Bay Area communities. A regional morgue is needed to address the significant logistical, security, personnel, supply and transportation resources required to conduct operations. The Operational Areas do not currently have the independent capabilities to provide a significant surge capacity to support 12 Operational Areas.

As additional mass fatality response assets and resources are deployed and moved into the area, a plan to locate these assets in one of the three regional incident morgues in the Peninsula, North Bay, and South Bay is recommended. This distribution would provide significant mass fatality processing support in proximity to the counties hardest hit by the earthquake as well as the counties that do not have the capacity to manage the event-related fatalities. Counties have the option to be considered as a regional incident morgue site if facilities that meet DMORT requirements are available and structurally sound.

5.3.6.5 Site Selection

Proper site selection is required to ensure safe off-loading, proper staging, and assembly of the regional incident morgue. The site must meet size, layout, and support infrastructure requirements. Facilities such as school gyms and public auditoriums are not used after the demobilization. Large tents may be used, but they must be able to be

configured to meet flooring, water, electricity, and heating, ventilation, and air-conditioning requirements.

Regional Incident Morgue site criteria:

- Hard, weather-tight roofed structure
- Non-porous floors, concrete preferred
- Floors capable of being decontaminated
- 5,000 square-foot re-supply and staging area (separate)
- Minimum area of 10,000 to 12,000 square feet to accommodate all of the morgue stations and over 10,000 pieces of equipment. More square footage may be needed for casket storage or other event-specific needs.
- Tractor trailer accessibility
- 10-foot by 10-foot door on ground level or with loading dock
- Separate accessible office space for Information Resource Center
- Separate space for administrative needs and personnel
- Standard household current (110 to 120 volts)
- Power from accessible on-site distribution panel (200-amp draw)
- Electrical connections to distribution panels installed by local licensed electricians
- If power is not available, 125--kilowatt (kW) diesel generator and a separate 70-kW diesel generator
- Small 7- kW diesel generators
- Single-source cold-water connection with hose bib connection
- Existing telephone line with the option to add more
- Wireless Internet connectivity
- Pre-existing restrooms preferred
- Gray water disposed of using existing drainage
- Biological hazardous waste disposed of according to local and California requirements
- Terrain forklift capable of lifting 10,000 to 15,000 pounds, with 6-foot forks and fork extensions for safe off-loading of equipment and supplies, provided by local authority
- Forklift capable of lifting 2,000 to 4,000 pounds
- Sufficient refrigerated storage for processed and unprocessed remains

5.3.6.6 Regional Morgue Opt-In Requirements

Counties have the ability to opt in or opt out of using the regional incident morgue. Counties electing to use the regional incident morgue site are required to prepare, establish a county case file number, assign a designated County Coroner/Medical

Examiner as a single point of contact, transport the event-related fatalities to the regional incident morgue site, and retrieve any unidentifiable or unclaimed human remains, fragments, and personal effects.

5.3.6.7 DMORT and Regional Logistical Response Assistance Teams

Under the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Preparedness and Response, the DMORT DPMU team has been integrated into the three Regional Logistical Response Assistance Teams (LRATs). The LRATs consist of logistical personnel from throughout the National Disaster Medical System and fall under the leadership of ASPR Logistics. This team is responsible for maintaining and deploying the equipment cache, which includes 20,000 human remains pouches.

Region IX DMORT members come from California, Arizona, Nevada, and Hawaii. DMORTs are supported by Disaster Medical Assistance Teams (DMATs) on all deployments.

Regardless of the source of these resources, the following concept of operations has been suggested by the Federal ESF #8 Fatality Management Interagency Steering Committee:

- CONOPS for morgue operations
- Morgue operations and postmortem processing
- Family assistance, pre-death information that aids identification, data collection, and data management
- Identification
- Death notification, generation of a death certificate, release, and final disposition

DMORTs:

- Provide equipment and resources to establish a mobile morgue
- Perform autopsies
- Identify remains by finger/footprint, forensic dental, and forensic pathology and anthropology methods
- Establish and assist in operating the family assistance center
- Prepare remains for final disposition (except for cremation)
- Provide decontamination through the DMORT Weapons of Mass Destruction (WMD) team

Coroners/Medical Examiners:

- Maintain responsibility to recover remains
- Must determine cause and manner of death
- Sign all death certificates

A DMORT WMD team is a stand-alone team within the DMORT system that specializes in the scientific and legal recovery and decontamination of human remains.

DMORT forms for the management of a mass fatality event are provided in **Appendix D**.

5.3.6.8 Regional Incident Morgue Throughput

DMORTs with LRAT logistical support are estimated to be able to process 144 bodies in a 24-hour period. Each human remain takes approximately 40 minutes to be processed. By providing altered standard of death care options and enhanced capacity at critical choke points, the rate is increased to 200 human remains per 24-hour period. Steps are underway to procure and deploy resources to eliminate these choke points. These steps include procurement of digital cameras, digital dental radiological equipment, digital full-body x-rays, and fingerprinting equipment, and by increasing the number of staff responsible for fingerprinting and dental x-rays. Eliminating choke points and adding three additional DMORTs with LRAT logistical support could provide the capacity to process over 500 bodies per 24-hour period. Supplemental equipment is required. Full computer support and personnel are needed to facilitate the entry of information into the database.

5.3.6.9 Refrigeration Units

Portable, freestanding refrigerated units with a 500-body capacity per unit are available from multiple sources. Infrastructure and support personnel are provided by the contractor-owner for the maintenance of this capacity for as long as necessary. Additional capacity for human remains storage is in the form of 200 refrigerated trailers which have a total storage capacity of 5,000. The refrigerated trucks, which transport human remains from fatality collection points to temporary storage, serve as backup to the free-standing refrigeration units.

5.3.6.10 Security

The morgue operations are secured by local/State law enforcement officers who establish outer perimeter security and also provide internal site security. At locations on military installations, perimeter security is provided by military police. The Federal Protective Service has provided security for DMORT personnel on previous missions. All entrances to the refrigerated storage units are locked.

5.3.6.11 Identification

The identification process is complex and likely to be lengthy. Aggravating circumstances can include loss of medical and dental records, decomposition of remains, and wide geographical dispersal of family members.

The Coroner/Medical Examiner is responsible for establishing the identity of the decedent using the following methods:

- Prints (including fingerprints, handprints, toe prints, and footprints, if indicated)
- Odontology (forensic dental examination)
- Radiology
- DNA analysis

- Permanently installed medical devices with recorded serial numbers
- Distinctive physical characteristics (e.g., ears, scars, moles, tattoos) for which appropriate antemortem photographic documentation can be provided may be used in an exclusionary capacity

A team chaired by a designated pathologist from DMORT meets daily to review and confirm identifications. The team consists of representatives from the forensic science disciplines and the local Coroner's/Medical Examiner's Office. The team reviews the section identification reports and completes an Identification Summary Report each day. All committee members present sign the Identification Summary Report indicating concurrence of confirmed identification. The Identification Summary Reports are delivered to the Coroner/Medical Examiner for his/her approval and signature. A copy of the report is given to the Coroner/Medical Examiner.

The team leader meets regularly and routinely with the Coroner/Medical Examiner to provide updates on the progress of the identification process. The team leader also communicates daily with the Coroner/Medical Examiner and reports and documents the completion of identification and the release of the remains to the next of kin.

A detailed technical plan describing the identification process is currently under development. The following forms are provided in **Appendix D**: Potential Living Donor Form and DNA Family Reference Collection Form. These forms provide the necessary documentation to assist with DNA analysis for the positive identification of the decedents.

5.3.6.12 Victim Identification Program

Federal fatality management teams and DMORTs use the Victim Identification Program, which is the population of an electronic database to record all event-related information used in the decedent identification process. The Victim Identification Program database is a stand-alone database that does not currently integrate into other FEMA IT systems/databases. Information is stored in a central repository that is secure and accessible only by Federal fatality management authorized personnel. At the termination of the operation, all original records and data collected are turned over to the Coroner/Medical Examiner where the decedent was recovered. Copies are maintained by National Disaster Medical System.

5.3.6.13 Autopsies

When responding to a catastrophic mass fatality incident, it may not be practical to consider performing a complete autopsy on all remains. The Coroner/Medical Examiner should determine which remains require an autopsy (i.e., which remains would support the investigation). The number of cases requiring autopsy may exceed the operational capacity of the Coroner's/Medical Examiner's Office. The Coroner/Medical Examiner should coordinate support from adjoining jurisdictions, States, or from Federal resources, or may need to seek authorization to apply professional discretion to autopsy-only appropriate sample cases. Such authorization may be requested for inclusion in the disaster declaration or executive order covering the state of emergency.

5.3.6.14 Waste Handling

Liquid waste (e.g., body fluids) disposal procedures should be reviewed with Environmental Health staff. Usually, fatality liquid waste can be flushed or washed down ordinary sanitary drains without special procedures. Pretreatment of liquid waste is not required and might damage sewage treatment systems. If substantial volumes are expected, the local wastewater treatment plant personnel should be consulted in advance. Solid waste should be appropriately contained in biohazard or sharps containers and incinerated in a medical waste incinerator.

5.3.7 Phase 7: Level 2 Transportation and Temporary Storage

This phase involves the temporary storage and transport of human remains between the morgue facilities and the locations of final disposition.

The legal next of kin provide final disposition instructions to the morgue. Typically, a funeral home is designated to provide final disposition for the deceased. The morgue coordinates with the funeral home to provide a time for pickup and transport of the decedent for final disposition.

Upon arrival, the Release Station:

- Verifies identification of funeral director upon arrival
- Retrieves the remains from the holding area
- Verifies the case number on the human remains pouch, coffin, or shipping container
- Has receipt document signed by the receiving funeral director or other party

The human remains or fragments are then turned over to the receiving funeral director, for transport, or to another designated party.

5.3.7.1 Post-examination Temporary Storage of Human Remains

During a mass fatality incident, human remains and the personal effects of the deceased may need to be stored for an extended period while awaiting final disposition after morgue processing.

Final temporary storage is separate from initial temporary storage. The temporary storage area holds remains until released to the funeral director or other designated party for transportation to an area for final disposition. Remains are held in refrigeration or in caskets or shipping containers.

5.3.8 Phase 8: Final Disposition

In a mass fatality event, the mortuary system is also like to be overwhelmed. The Coroner/Medical Examiner must coordinate with the death care industry to identify strategies that the death care industry pursues to manage final disposition of the deceased. The following are some strategies to consider:

- Coordinate with the Cal EMA Regional Level and the California Funeral Directors Association to request assistance from funeral homes, cemeteries, and cremation

services in neighboring unaffected counties or affected counties that have a much lower death total. This aid could take the form of temporary staff and equipment/supplies, or of carrying out final disposition for some decedents in neighboring counties.

- Expand refrigerated storage capacity for remains that have been identified and are awaiting final disposition.
- Expedite cremation certificates, burial permits, and transit permits.
- Expedite the embalming process by providing aftercare services (embalming and casketing) at the Regional Incident Morgue to reduce the burden on local funeral homes.
- Secure temporary storage for embalmed and casketed remains in vaults using existing vaults and/or creating temporary vaults.

Counties in the region should sign Memoranda of Understanding to indicate the funeral homes, cemeteries, and crematoriums in their jurisdictions that agree to the plan and operate in accordance with it in the event of a mass fatality to the best of their ability and current capabilities.

Final disposition options include individual burial, State-sponsored individual burial, entombment, temporary interment, voluntary cremation, and involuntary cremation. If State-sponsored final disposition is required, the Coroner/Medical Examiner must arrange for transportation and handling of human remains.

5.3.8.1 Family Assistance Center[3]

In the aftermath of a catastrophic earthquake, family and friends frantically seek assistance locating their loved ones. It is most common for family and friends to show up at places their loved ones are likely to have been at the time of the earthquake or to places that may have information about the injured or deceased. The establishment of a Family Assistance Center (FAC) provides for two critical needs: it keeps family and friends away from incident locations and hospitals, so first responders can conduct vital life-saving operations without interference, and it provides the communications and support services family and friends desperately seek.

Family assistance describes various programs that are provided in a central location to help immediate family, other relatives, and friends of those persons directly affected by the incident.

The term “family” is not limited to those with biological or marital ties. The term “family” applies to all persons with a common concern or love for the injured or deceased. This loosely defined term includes parents, siblings, grandparents, life partners, spouses,

[3] The California Mass Fatality Management Guide: A Supplement to the State of California Coroner’s Mutual Aid Plan, prepared by Cal EMA.

fiancées, children, long-term family friends, and even co-workers; those who support the immediate family and provide information to the various response agencies.

There are several goals of family assistance. The first goal is provide a uniform level of immediate help to all survivors and families. This begins with the establishment of a call center. The call center gathers information from callers and enters initial details about the deceased into an information database, sometimes referred to as an information path.

Family assistance includes notification of the deceased's involvement in the event, providing transport, food, and lodging at or near the disaster area, and establishing a family assistance center with screened and trained individuals that are trained in communication skills, have an understanding of the process, and understand how to work with families of those who have lost someone to a sudden, unexpected death.

The second goal of family assistance is to establish a system for local authorities to quickly collect information from the families of the deceased. This effort includes collecting DNA references from families, gathering dental and medical records, and conducting detailed interviews about the deceased, and is often required to assist in the identification process.

The third goal of family assistance is to provide families with an understanding of what happens with regard to the deceased over the next few weeks and months. This is accomplished through a series of briefings conducted by local, State, and Federal government agencies, and/or the business involved, if the circumstance involves a transportation accident.

5.3.8.2 Site Selection

The traditional FAC is a secure facility established at a centralized location to provide information about missing persons who may be victims of the disaster. For the scenario earthquake over 7,000 fatalities are expected across multiple counties, requiring the establishment of multiple FACs. An FAC is established for each Regional Incident Morgue identified in **Section 5.3.6.4**.

Generally, the Operational Area Coroner/Medical Examiner is responsible for establishing the FAC. For the catastrophic earthquake scenario, the DMORT is responsible for operating Regional Incident Morgues. As part of that responsibility DMORT coordinates establishment of FACs near the Regional Incident Morgues.

The DMORTs coordinate with Operational Areas to identify facilities where both the Regional Incident Morgues and FACs can be established. The FACs should be close enough to the Regional Incident Morgues so that the Coroner/Medical Examiner can easily travel between the two, but not too close to expose friends and family to morgue operations.

5.3.8.3 Description of Rooms in the FAC

Operations Center: An operations center is needed to allow the different service groups and organizations to meet, coordinate, and plan. With all support agencies participating

in the operations center, family services can be provided, information can be shared, messaging can be standardized, and services can be efficiently and effectively provided without duplication.

General Assembly Room: A general assembly room should be a large room with a public address system for the purpose of providing updates on the search and recovery process to large gatherings of family and friends. Depending on the amount of family and friends present at the FAC, updates should be given multiple times per day.

Reflection Room: A Reflection Room should be available for victims' families and friends to quietly reflect, meditate, pray, seek spiritual guidance, or observe religious practices. When preparing this space for use, every reasonable consideration should be made to respect diverse cultures and beliefs.

Death Notification Rooms: Several rooms should be designated to provide privacy and expedite the notification process. The rooms are to be used to make the notification to the next of kin, that their loved one has been positively identified. However, it is preferable that death notifications be made at the family's residence rather than requiring families come to the FAC.

Counseling Rooms: Several small rooms should be available to provide private space where information such as antemortem data can be gathered from families and where families can receive counseling from clergy and mental health professionals. Families need to be offered disaster mental health and spiritual support in a caring, compassionate, and protected environment. Here they can also receive information on the identification process and be interviewed for baseline information. These rooms can also be used by the family to make calls to other friends and family.

Medical Area: A mass fatality event is extremely traumatic and friends and family may experience health issues during their visits to the FAC. The medical area is designated as a place where people can receive medical assistance.

Reception and Registration for Families. When friends and family members arrive at the FAC, the staff should greet them and gather information about who is visiting the FAC. Staff assigns them an escort who takes them to a designated area where they may be more comfortable and can be located if necessary. When friends and family leave the FEC, they should check out and leave their address so that they can be contacted with additional information and support and notification of their loved ones death. When an adequate number of personnel are available, an escort may be assigned to each family group. Escorts may help the families with any need that arises during their time at the FAC. The American Red Cross and some private companies can provide personnel trained in counseling to offer escort services.

5.3.8.4 Functions of the FAC

The functions of the FAC are as follows:

- **Collect antemortem data**. Personnel at the FAC are assigned to collect accurate and detailed antemortem information from the friends and families of the victims. This information may be gathered by experienced death investigators or funeral directors who have been briefed on the information they need to collect from the friends and families. If funeral directors are providing this service, it is critical that they act as representatives of the Coroner/Medical Examiner's office and not as funeral directors. Funeral directors may be selected to perform this service for many reasons, including their training in collecting antemortem information and their experience in dealing with families in crisis.

  Death certificate information can be collected at the initial interview to save the families from going through another interview at the funeral home. Many states require that similar information be provided on death certificates, including the deceased's occupation, level of education, and residency in the name of the informant (person providing the information). **Figure 5-4** presents the coordination of information between morgue operations and the FAC below for positive identification of the decedents.

- **Conduct death notifications**. The procedures for death notification are an important component of a sensitive family assistance plan. Whenever possible, death notification should be made by a team rather than an individual. The team may consist of a representative of the Coroner/Medical Examiner, a member of the clergy, a mental health professional, and possibly a medical professional. Some families may feel a notification team is not necessary, but other families may need the support. It is better to err on the side of having support persons present in case they are needed than to need them and not have them present. If the family's own pastor or other clergy member is present, the team clergy should play only a supportive role.

  The notification team should be well briefed on the information being provided to the families so they can answer as many questions as possible. The team should be given a fact sheet that contains relevant information that they can leave with the family for later reference, because family members may forget to ask questions at the time of the notification.

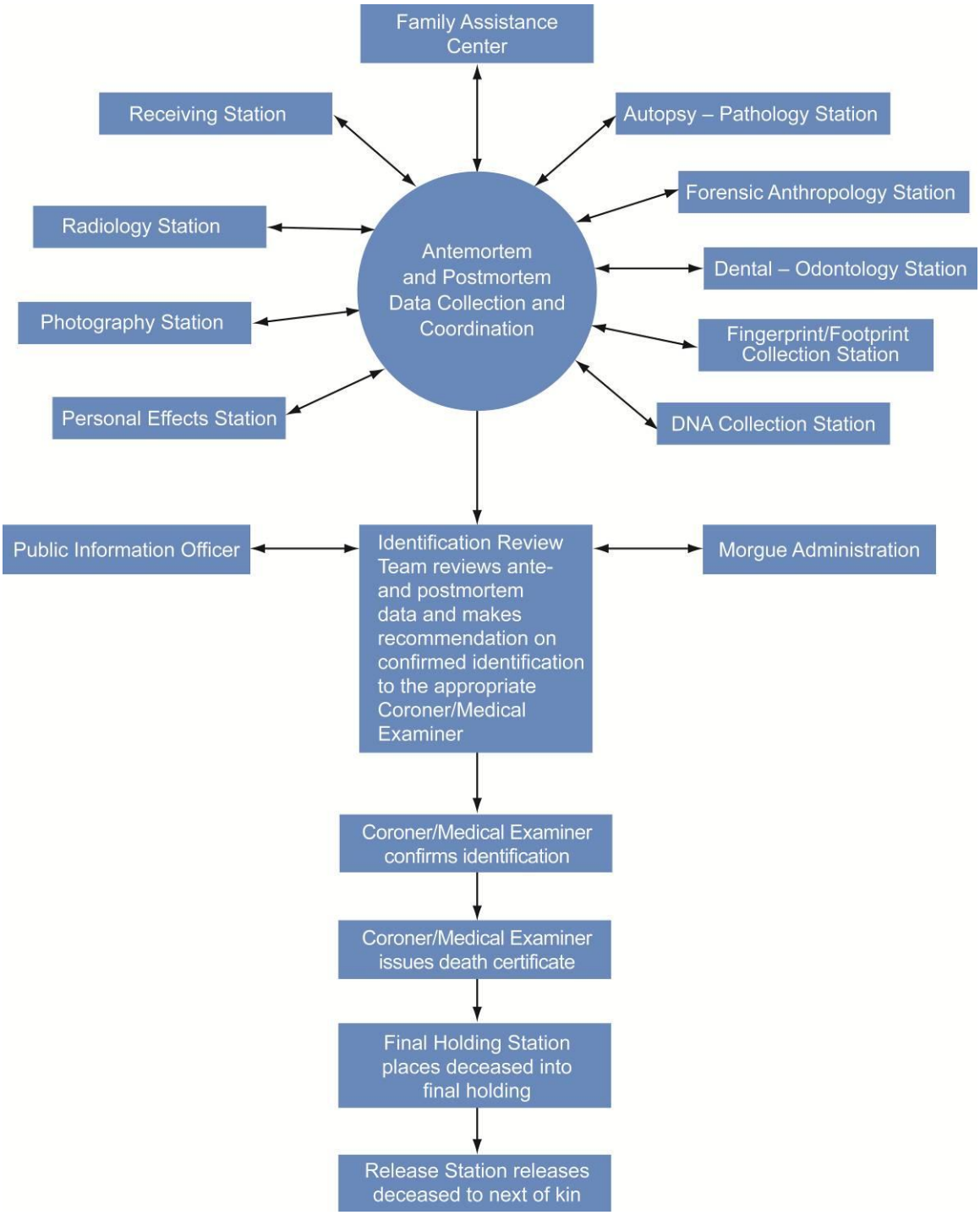


Figure 5-4. Antemortem/postmortem data collection and coordination.

Death notification teams also should be available to travel to meet with families who do not want to or are not physically able to come to the FAC. Next of kin who are out of town should always be notified in person. When a death notification must be made in a distant location, the office charged with death notification responsibilities can contact the sheriff or chief of police in the distant community to request coordination of notification. The American Red Cross or the State victim assistance agency can assist in providing a mental health professional. The office charged with death notification responsibilities can provide the notifying law enforcement agency with a letter from the Coroner/Medical Examiner that contains information about the deceased and the name and contact number for the Coroner/Medical Examiner in case the family has questions.

Staff conducting a death notification for a victim whose body is not intact must ask the family at the time of notification if they want to be informed about later identification of common tissue. Informing the family later about common tissue identification without their consent may be upsetting to them once they have buried their loved one. Families may prefer to be notified only about the memorial service and burial of the common tissue. After the family members make their decision, staff should provide them with a written copy of their decision as a reference for what they agreed to at that time. **Appendix D** contains a Remains Release Authorization Form, which is the formal mechanism for release of the decedent to the legal next of kin.

- **Establish and share victim's degree of suffering**. The issue of victims' suffering can cause tension. On the one hand, there is a need to preserve evidence that establishes the amount of suffering the victim endured for use at the perpetrator's sentencing hearing. On the other hand, there is great need to comfort families and answer their questions about how much their loved ones suffered before dying. During the recovery of bodies, the Coroner/Medical Examiner must sensitively convey information to families that is consistent with the information provided to the prosecution.
- **Implement security measures**. Access to the FAC must be controlled so families and friends of the victims have privacy and are not overwhelmed by the press, photographers, and the public. Checkpoints may need to be established at entrances to the FAC and its parking lot. A badging or credentialing system can be implemented that gives family members and authorized workers easy access to the FAC.
- **Disseminate public information and work with the media**.[4] The Coroner/Medical Examiner should designate a public information officer at the FAC

[4] U.S. Army Research and Development and Engineering Command, Military Improved Response Program, Department of Justice, Office of Justice Programs, and Office of Domestic Preparedness, Capstone Document: Mass Fatality Management for Incidents Involving Weapons of Mass Destruction (2005).

to release information about the fatalities resulting from the earthquake. The press has questions that only a representative of the Coroner/M.E.'s office can answer properly, including questions about the recovery operation, identifications, and condition of the bodies. Information must be released to the press only by the designated public information officer and not by any staff members of the Coroner/Medical Examiner office. The joint information center at the Cal EMA SOC or joint field office develops a strategy for disseminating information to the public, and as a standards rule no information should be released to the media unless it has been discussed with the families first.

5.3.8.2 Personal Effects Collection Point

Personal effects are the decedent's belongings that are located on or near the deceased at the time of an incident. Since the recovery of personal effects is extremely meaningful to the family of the deceased, the effects are handled with the same care as human remains. Effects are removed from each body, inventoried, and assigned an identification number correlating them back to the remains. The effects are stored in the morgue, in a secure area, called the Personal Effects Collection Point. Once remains are identified, families are notified as to the existence of the personal effects and at that time, it is determined how and when the effects are to be returned to the next of kin.

Personal effects are inventoried, weighed, and categorized as either associated or unassociated. Associated items are those belongings found on an identified person or that have a clear and legible name or other identifying feature. Unassociated items are those recovered from human remains that are not identified or do not have a clear or legible identifying feature.

As families gather at the FAC and are interviewed, they are briefed about the personal effects recovery and return process. For those families that wish to be involved, their preferred level of participation and contact information is entered into the central database, and they are notified as associated items are recovered. Legal next of kin are asked to provide personal effects disposition instruction, which includes having the items returned or destroyed. Those items that are unassociated are documented in a pictorial catalogue. Next of kin who wish to receive the pictorial catalogue are given a set period to review the catalog and make a formal, written claim.

County government may bring in specialized teams to manage this process or require local law enforcement agencies to manage the personal effects process. The people involved in returning the personal effects are seen as the public face of the mass fatality response operation. The return of personal effects to the family can provide the family much needed comfort.

Because of the nature of a mass fatality event, death is typically sudden and violent. The personal belongings of the victims become significant to family members because typically the remains are not viewable or little, if any, remains may be recovered. The team assigned to personal effects attempts to associate the items with the victim and return the items to the persons who are legally authorized to receive them.

It is recommend that the responsibility for collecting personal effects be assigned to a third party such as a private contractor with a proven track record in taking care of personal effects or a local major law enforcement agency.[5] Law enforcement agencies are good candidates for providing this service because they are skilled in evidence collection.

The team assigned to manage personal effects should consider establishing the following functions/roles:

- Compiling a list of persons eligible to receive personal effects
- Documenting the collection and release of the effects
- Manager and point-of-contact for the Personal Effects Collection Point
- Developing policies for disposition or destruction of all personal effects, including how effects are cataloged and the length of time the effects are stored

5.3.8.3 Preparations for Funeral Homes and Crematoriums

The Coroner/Medical Examiner or a DMORT representative at the Regional Incident Morgue coordinates final disposition with funeral homes and crematoriums. Providing information about the number of remains ready for release assists funeral homes and crematoriums with planning for an increased caseload. Funeral homes and crematoriums communicate their current capabilities for disposition of remains. Depending on their current capabilities, the Regional Incident Morgues can store remains until a time when the funeral homes and crematoriums can accommodate the receipt of additional remains.

5.3.8.4 Death Registration (Vital Records)

To meet the legal requirements of many jurisdictions, a death certificate is issued only when a positive identification is made. This occurs when a conclusive match exists between records created with information that existed before death (antemortem) and records created after death (postmortem). A death certificate allows the family to formally acknowledge the death and begin the civil process of probate.

Death registration is a State/county responsibility and each county may have its own laws, regulations, and administrative practices to register a death. There is a legal distinction between the practices of pronouncing a death and certifying a death.

In day-to-day Coroner/Medical Examiner operations, the California Electronic Death Registration System (CA-EDRS) is used to create and register death certificates – a permanent record of the death of an individual. Information from death certificates has several valuable legal and statistical uses, particularly in the evaluation of public health programs or in the case of a catastrophic earthquake identifying the total number of deaths occurring as a direct result of the earthquake. CDPH is responsible for administrative oversight of death registration and for the operation of CA-EDRS.

---

[5] Robert A. Jensen, Mass Fatality and Casualty Incidents: A Field Guide (CRC, Boca Raton, 2000).

After a catastrophic earthquake, communication system degradation may hinder Coroner/Medical Examiner use of the system requiring the implementation of an alternate method of registering deaths. CDPH is prepared to issue and collect paper death certificates if the CA-EDRS is unavailable. With the operation of Regional Incident Morgues, administrative support staff at each morgue prepares the death certificate for each victim and make it available for the signature of a designated Coroner/Medical Examiner in the region. It is the responsibility of the Coroner/Medical Examiner to sign all death certificates for deaths occurring under their jurisdiction. After the death certificates are signed, they are delivered to CDPH as required by statute.

It is expected that if the CA-EDRS is operational and the Regional Incident Morgues are using the system, it provides timely death data, timely cross matching with birth certificates for anti-fraud purposes, allow online verification of the decedent's social security number, and provide online access to fact–of-death information.

5.3.8.5 Disposition of Unidentified Remains

After the earthquake, the Coroner/Medical Examiner for each impacted county makes the determination that all victims have been identified. Although the Coroner/Medical Examiner is able to make this determination, it is likely that unidentified human remains still exist either at the incident location or under the control of the Coroner/Medical Examiner. The Coroner/Medical Examiner can make the decision not to positively identify the remains, but accommodations must be made for their proper disposition. The Coroner/Medical Examiner should make every effort to discuss disposition of remain fragments with the identified victim's families. Typically, unidentified remains are placed in a casket and buried with a grave marker. Use of mass graves for unidentified remains is not deemed to be a viable option.

5.3.9 Phase 9: Demobilization

Demobilization takes place when the centralized coordination of the mass fatality event is no longer required in the affected area. At a time when the majority of remains have been recovered, documented, and released, the DMORT teams begin to demobilize the Regional Incident Morgues and transfer responsibility for the discovery, recovery, management and disposition back to the Coroner/Medical Examiner for each respective jurisdiction. At the same time, County Coroner/Medical Examiners should begin reestablishing local capabilities for morgue operations and the continued provision of family assistance.

Mass Fatality Management

TOOLKIT

Table of Contents

Disaster Mortuary Operations Response Team (DMORT) Forms

Site Recovery Record Form

Tracking Form

Personal Information Form

Clothing Inventory Form

Jewelry Inventory Form .....

Fingerprints Form .....

Radiology Form .....

Pathology Form .....

Anthropology Form .....

DNA Specimen Form .....

Mass Fatality Management Toolkit

This appendix contains protocols and forms that can be used by Coroners/Medical Examiners and Disaster Mortuary Operations Response Teams in the management of mass fatalities after a disaster. The protocols and forms are examples only and are not mandated for use for any jurisdiction.

The example morgue protocols are based on the protocols developed by DMORT III to document the Incident Morgue operations for the United Airlines Flight 93 response. They do not reflect a formal DMORT protocol.

D1 Triage Station Protocol

1. Open bags are delivered from incident sites.
2. Team sorts through materials to separate human tissue from other material.
3. Isolated personal effects are routed to [AGENCY].
4. All items of evidentiary value (e.g., possible fragments of weapons) are routed to [AGENCY].
5. Human remains are reviewed for further analysis. The remains may include the following:
   - Tissue that will not yield any information in one or more of the following areas:
     - Autopsy – Pathology (e.g., identification, pathology, injury)
     - Forensic Anthropology (e.g., age, sex, stature, ancestry)
     - Dental – Odontology
     - Fingerprint or footprint analysis
     - DNA identification; consult DNA Station for guidelines
   - Tissue with the potential for further identification is placed in a bag and the Victim Processing Record is checked in the left margin to indicate the Stations where the remains should be routed. All remains go to Photography and Radiography. Remains go to the DNA Station when necessary.
     - The triage scribe signs and dates the Victim Processing Record. The remains are routed to the Receiving Station.
6. Human remains associated with personal effects are treated as follows:
   - The personal effects are removed from the human remains as long as removal will not damage or compromise the remains. Notation about the clothing is entered into the comments section of the Victim Processing Record and the clothing is turned over to [AGENCY].
     - If the human remains are suitable for further analysis, they are processed through the regular channels. [AGENCY] is informed that the human

remains will be assigned a case number in the Receiving Station, and they should accompany the remains to the Receiving Station to obtain that number.

  - If the remains are not suitable for further analysis, they are placed in the common tissue red barrel.

- For remains were the personal effects cannot be removed without possible damage, notify the [AGENCY], and leave effects associated with tissue. Mark "[AGENCY]" in red marker on the Victim Processing Record. Send remains through procedures described above. [AGENCY] receives the remains after all other relevant Stations have signed off. These remains may be expedited through the systems at the request of the [AGENCY].

D2 Administration Station Protocol

1. Coordinate with the Incident Morgue Manager.
2. Maintain Victim Processing Records for all decedents.
3. Verify accuracy of records, consistent case numbers, and signatures for all Victim Processing Records.
4. Confirm completion of the Identification Summary Report.
5. Ensure responsible Coroner/Medical Examiner signs death certificate.
6. Coordinate with the Family Assistance Center for the release of decedents.
7. Deliver required reports to responsible Coroner/Medical Examiner.

D3 Receiving Station Protocol

1. Receive human remains from Triage Station.
2. Record next sequential case number available and other identifying information from the scene on the flip chart.
3. Label human remains pouch with assigned case number. Do not put provenience or scene information on the bag; put only the case number.
4. Create a folder with the assigned case number. Place appropriate paperwork, as indicated on the Victim Processing Record, inside the folder. Number all paperwork appropriately.
5. Create a case number tag with the assigned case number. Place the case number tag in the folder, NOT in the human remains pouch.
6. Staple Victim Processing Record to front of file. Initial this form.
7. If human remains are determined to be unrelated at any Station, separate them and return to the Triage Station for assessment according to the following:
   - One specimen is designated by the original case number.

- The second specimen is admitted into the identification process according to the above procedures and received new paperwork.
- All paperwork for each specimen should have a reference to the case number of the other specimen.

D4 Morgue Human Remains Receiving and Sanitation Protocol

D4.1 Human Remains Receiving

1. Remains are delivered in human remains pouches from the incident site. These are weighed and placed in cold storage area #1.
2. As the Triage Station is ready, the human remains are brought in at a gradual rate so that materials do not sit out in ambient temperature any longer than necessary.
3. After the remains are processed through all stations, they are stored in sequential incident case numbers in cold storage area #2.
4. For Quality Assurance, the common tissue remains are x-rayed and reviewed by the Autopsy/Pathology Station. Remains identified as important may be pulled from the human remains pouches and returned to the Triage Station for reassessment. Once Quality Assurance has been completed, the common tissue remains are bio-sealed in larger bags. These bio-sealed bags are numbered and dated, and a log is maintained. Once labeled, the bio-sealed bags are placed in cold storage area #2.

D4.2 Sanitation Protocol

1. Temporary sinks are periodically checked for spillage and overflow of drainage.
2. At the cessation of each day's Incident Morgue operations, the following sanitation measures are taken:
   - All human remains, whether processed or unprocessed, are returned to cold storage. These are sorted and labeled for the Station at which they were awaiting examination so they can be returned to that Station the next day.
   - All biohazard materials are collected and sealed for pickup.
   - New biohazard containers are prepared and placed in the Incident Morgue.
   - All sinks, processing surfaces, and processing areas are disinfected with bleach or other disinfectants.
   - Fluids and processing waste buckets are collected and properly disposed.
   - The buckets are then treated with bleach or other disinfectant.
   - Floor areas are cleared and mopped with disinfectant.
   - Cold storage areas are checked and locked.
   - All Incident Morgue entrances are secured.

D5 Temporary Human Remains and Personal Effects Removal Protocol

1. Use the Temporary Removal Form when [AGENGY] needs to temporarily examine human remains/personal effects.
2. [AGENCY] should be written in red marker in the comments section of the Victim Processing Record and signed by the [AGENCY].
3. Keep the form in the station until the [AGENCY] returns the human remains/personal effects and signs them back in.

TEMPORARY REMOVAL FORM

Case # _____

Date _____

Time _____

Checked out from station _____

Checked out by (AGENCY/NAME) _____

Return date _____

Return time _____

Checked in by _____

D6 Permanent Human Remains and Personal Effects Removal Protocol

1. Use the Permanent Removal Form when [AGENGY] needs to permanently take custody of human remains/personal effects for analysis.
2. Write [AGENCY] using a red marker in the Comments section of the Victim Processing Record and obtain the signature of [AGENCY'S] representative.
3. Prepare a copy of the paperwork to travel with the human remains/personal effects.

PERMANENT REMOVAL FORM

Case # _____

Date _____

Time _____

Checked out from Station _____

Checked out by (Agency and Name) _____

Incident Morgue Representative Signature _____

D7 Decontamination Protocol (When Necessary)

1. All personnel must undergo a medical examination to ensure they are physically fit for duty before beginning operations.

2. Medical examinations will continue throughout operations.
3. Rehab is an important component for personnel.
4. Personnel must be decontaminated when finished with their rotation.
5. Weather must be accurately monitored throughout operation.
6. Communications must be maintained throughout operation.
7. Human remains are brought from the Incident Site to the Dismount Area adjoining the Red Zone/Hot Zone.
8. A case number is attached to the human remains for tracking.
9. All clothing and personal effects are removed.
10. Photos are taken of remains and personal effects.
11. Scribes document all issues. (All information will be documented by scribes throughout the process and information will be transported with remains to the morgue.)
12. Remains are sent to gross decontamination (Yellow Zone/Warm Zone).
13. Remains undergo a full body exam.
14. Gross decontamination takes place by fully scrubbing remains with appropriate cleaner.
15. During the decontamination process, body fluids and other human tissue must be treated as bio-hazardous waste.
16. Scribes document height, weight, wounds, scars, hairstyle, etc.
17. Photos are taken of remains, and personal effects are photographed again.
18. Remains are passed to Chemical Agent Monitor (C.A.M.) or detection technicians in the Detection Station (part of Yellow Zone/Warm Zone and the Green Zone/Cold Zone).
19. Detection technicians use C.A.M to detect chemical agent, radiation, or biological agent, if any.
20. Forensic specialists are available, if needed.
21. If there is any amount of detectable agent on the remains, the remains are sent back to the gross decontamination station.
22. If there is no presence of contamination, the remains will be placed into a body bag, a case number will be affixed, and the remains passed to the disposition technicians in the disposition area (Green Zone/Cold Zone).
23. After remains are declared “clean” and placed in a body bag, disposition technicians will place remains in the proper receptacle (e.g., morgue, refrigerated trailer).
24. All forms, images, and documentation are turned over to an administrative technician for all data to be entered into the designated database, which is

forwarded to the Incident Morgue, Coroner/Medical Examiner, law enforcement and/or other required agency.

D8 Photography Station Protocol (Human Remains and Personal Effects)

1. Receive human remains/personal effects and placed them on white background (photo copy stand).
2. Place right-angle metric rule next to the remains/personal effects. Add extension ruler, if required.
3. Place case number tag (from folder) with case number next to the remains/personal effects.
4. Take photograph.
5. Record in Photo Document Log:
   - Date
   - CD/DVD name or number
   - Photo/digital image number
   - Case number. Add a letter suffix for subsequent photos of the same remains/personal effects (e.g., 32, 32A, 32B).
   - Camera settings
   - Make notations, as needed
     - Dental
     - Perforations in tissue
     - Correlation of case numbers
     - "PE" if personal effects are in the photo
6. Sign and date the Victim Processing Record and label as follows:
     - CD/DVD with the case number and the mass fatality incident name
     - Exterior of CD/DVD case with case number
     - Ziplock baggie with mass fatality incident name and photo number
7. Place Photo Document Log in baggie and seal.
8. Document photo numbers and human remains/personal effects shots in the Photo Document Log.
9. If the remains/personal effects come back to be re-photographed, look up the case number in the Photo Document Log to determine the last number/suffix used so that the new photograph can receive the correct sequential number. For example, if the remains/personal effects labeled 32 had three photographs taken when it originally came through, those photos are numbered 32, 32A, and 32B. If #32 comes back for more photos, it should be labeled 32C, 32D, etc.

- Photography Station should make a copy of the original Photo Document Log.
- Designated law enforcement officer will take possession of digital images and the original Photo Document Log.
- Designated law enforcement officer will hand-deliver this directly to [AGENCY].
- Designated law enforcement officers will keep a copy of the Photo Document Log for themselves.
- Place one set of photographs in the original postmortem files.
- Place a second set in the postmortem file copies maintained by DMORT.
- [AGENCY] maintains all original digital data/images.

D9 Radiology Station Protocol

1. Turn on processor at beginning of the day by pressing the run button. Processor will be ready in approximately 15 minutes. Ready light will come on when processor is ready.
2. Wear gloves at all times.
3. Place cassette inside plastic cover. Place human remains on cassette. Depending on the size of the cassette, several items may be radiographed on the same digital image/film.
4. Label the remains with the corresponding case number with the lead numbers provided. Lead numbers should be placed as close to the remains as possible. Do not place multiple remains together if the case numbers run from 0 to 1 (example, 60 with 61).
5. Attempt to place the remains in anatomical position when possible. The Forensic Anthropology or Autopsy – Pathology team will assist as needed.
6. Return the digital images/film to the imaging area. It is useful to have one team member outside the Incident Morgue to transport and process the film from the Incident Morgue door. This eliminates signing in and out, and having to put on and take off personal protective equipment.
7. Review the film for adequate resolution and proper labeling.
8. Make sure the film has the proper case number label along with mass fatality incident name on the film.
8. If remains need to be repositioned to reflect anatomical position of the body part, take an additional radiograph.
9. Notify [AGENCY] of any unusual findings (e.g., non-incident related fatality).
10. Assign the scribe to do the following:
    - Complete the Radiology Form

- Initial logbook
- Place films in corresponding x-ray folder. If multiple remains are included on one film, note on outside of x-ray folder.
- Sign the Victim Processing Record on the front of the folder
- If remains are not received in numerical order, note missing remains for future reference. If remains are not received by the end of the day, contact the Incident Morgue Manager

11. Complete the following end-of-day cleanup procedures:

- Use disinfectant spray or wipes on all equipment, cassettes, and table.
- Turn off x-ray equipment and processor. Lift the lid of the processor for ventilation.

12. When a radiograph is requested for review by another station, that station's representative will sign out the radiograph with the date and time and sign back.

D10 Dental – Odontology Identification Station (Postmortem – Morgue Operations)

1. Receive dental remains from previous station.

2. Clean remains.

3. Examine and chart remains according to CalDIT Manual, page 7).

4. X-ray dental remains (conventional/digital)

5. Take digital photo of remains (if authorized by DMORT Commander; see CalDIT Manual, page 7).

6. Complete and copy all postmortem records.

7. Deliver and log postmortem record to dental comparison Station (see CalDIT Manual, page 10)

D10.1 Dental – Odontology Identification (Antemortem – Family Assistance Center)

1. Obtain list of possible victims

2. Contact last known treating dentist

3. Record antemortem dental records (see CalDIT Manual, page 8)

4. Deliver information to antemortem file (see CalDIT Manual, page 9)

D11 Autopsy/Pathology Station Protocol

1. The pathology analysis is completed by a team consisting of a pathologist and a scribe.

2. The human remains are received and placed on the examination table. Case number is verified on file and on the remains bag.
3. The pathologist:
   - Assesses appropriate dimensions and features of each of the remains.
   - Notifies [AGENCY] of any unusual findings (e.g., possible wounds).
   - If remains cannot be analyzed, the forms must still be completed. A notation of "no analysis" or "no pathology" should be made.
4. The Scribe:
   - Locates x-ray and places it on light box for review.
   - Transcribes information dictated by pathologist to Pathology Examination Form.
   - Completes Pathology Log for each of the remains.
5. Pathologist signs and dates Pathology Examination Form and the Victim Processing Record.

D12 Forensic Anthropology Station Protocol

1. The anthropological analysis is typically completed by a team consisting of two anthropologists and one scribe.
2. The human remains are received and placed on the examination table.
3. The case number associated with human remains is verified on the file and on the human remains bag.
4. The anthropologist:
   - Assesses biological parameters.
   - Reviews Autopsy – Pathology and Dental – Odontology forms for consistency (e.g., bone, side, biological parameters) with anthropology assessment. If there is a discrepancy, the team will consult with the other team(s) and reach a consensus on the assessment.
5. The Scribe:
   - Locates the x-ray and places it on light box for review
   - Transcribes information dictated by anthropologists to Anthropology Examination Form
   - Completes Forensic Anthropology Log for each of the remains
6. Anthropologist signs and dates Anthropology Examination Form and the Victim Process Record.

D12.1 Forensic Anthropology Cleaning Protocol

During the processing of remains by anthropology, it may be necessary to remove the tissue from bone features used for analysis of age, sex, or pathology in order to

observe subtle features. All attempts are made to remove the adherent tissue using scalpels, scissors and/or periosteal elevators. If additional tissue removal is necessary, the following procedures are observed:

1. Runner takes remains to DNA for immediate sectioning. If DNA requires a section of the bone, indicate which part is still needed for anthropological analysis and return this portion to anthropology after sectioning.
2. Process bone as needed:
   - Place the bone in microwave-safe container and fill with water so bone is barely submerged. Microwave for 5 minute intervals and continue to clean the bone manually (up to 30 minutes total).
   - If tissue is still present after heating and cleaning, soak in bleach solution (50% bleach, 50% water) for 1 hour. Increase bleach concentration for second soaking if necessary.
   - Indicate cleaning procedures used (microwave, bleach, etc.) in comments of Anthropology Examination Form.

D13 DNA Station Protocol

1. Set up computer from the Armed Forces DNA Identification Laboratory (AFDIL) with AFDIL incident number and initials of AFDIL personnel present.
2. Set up the station for DNA recovery.
   - Scalpels
   - Stryker saws
   - Diluted (10%) bleach solution
   - Disposable covers (12 × 12 Bench Kote)
   - 4 × 4s to wipe instruments
   - Collection tubes
   - Evidence bags
3. Human remains should come to DNA Station last. If the Victim Identification Form indicates that a Station has been skipped, a runner should be directed to return the remains and file to that Station. Exceptions can be made for special treatment of the remains by request from the [AGENCY].
4. The DNA recovery team examines the remains to determine whether a sample will be taken, as per AFDIL guidelines:
   - 5–10 grams of deep skeletal muscle (avoid tissues that may have been crushed by incident impact or blast forces)
   - 1–2 cm x 4–6 cm x 0.5–1 cm of cortical bone (avoid anthropological landmarks and articular margins, as well as fresh-broken margins, when possible; cut windows in long bones and crania)

- Upper or lower canine or other intact tooth without restorations
- Other portion of soft or hard tissue that fits into a 50-mL conical tube

5. The case number of the remains is noted on the DNA Log, along with a YES or NO indication for sampling. Start log with date, page number, and mass fatality incident name.
6. If a sample is taken, the remains are placed into a specimen tube that has been pre-labeled, by hand, with the AFDIL number AND the case number. The numbers should appear on the tube itself AND on the lid.
7. The specimen tube is given to the computer operator. The computer operator:
   - Enters the case number of the remains, the type of material, and the exact nature of the remains.
   - Generates two labels
     - The first label is placed on the tube on the opposite side of the hand-written numbers, as close to the lid as possible.
     - The second label is placed on the plastic evidence bag.
   - Inserts the labeled tube into the labeled bag
     - The bag is heat-sealed and placed into a cooler or a –20° freezer until it is released to AFDIL. Once the remains are frozen, they should remain frozen.
     - The remains should be kept cold while awaiting sampling. If there is an extended break, or if the sampling takes longer than usual, the remains should be returned to refrigeration temporarily.
     - Completed samples are released to AFDIL by the Coroner/Medical Examiner.
     - The Victim Processing Record is initialed, and a YES or NO is written to indicate sampling.

D14 Runner Protocol

D14.1 General

- Help locate files and human remains as needed
- Help keep remains moving from one Station to the next
- Make sure that files and/or remains removed from any Station are logged out and back in appropriately
- Human remains of interest to the [AGENCY] are given priority

D14.2 Photography Runner

- Pick up files and human remains

- Verify that remains and file numbers match
- Verify that Photography has signed off on the Victim Processing Record
- Deliver to next appropriate Station. Check the Victim Processing Record to determine Station. This is usually Pathology but may be Dental - Odontology, Fingerprinting or Footprinting, or Forensic Anthropology

D14.3 Autopsy/Pathology Runner

1. Keep human remains in order, labeled "AUTOPSY - PATHOLOGY – TO BE DONE."
2. Keep files that correspond to the remains in numerical order.
3. Once analysis is completed, deliver the remains and file to next station.

D14.4 Forensic/Anthropology Runner

1. Keep human remains in order, labeled "FORENSIC ANTHROPOLOGY – TO BE DONE."
2. Set out several remains (as space permits) in sequence with their associated X-rays and files.
3. Keep files that correspond to the remains in numerical order.
4. When analysis is completed:
   - Return x-ray to x-ray file.
   - Deliver remains and corresponding file to next station.

D14.5 DNA Runner

1. Place human remains in container labeled "DNA – TO BE DONE."
2. Verify that remains have been examined by all Stations before bringing to DNA for review.

D15 Evidence Walk-Through Protocol

1. [AGENCY] determines when human remains/personal effects become evidence. Whenever a Station processing remains/personal effects feels there is significant evidence that has been found, [AGENCY] is notified immediately to make the final determination.
2. Once [AGENCY] advises DMORT that particular remains/personal effects are to be treated as evidence, a Runner is assigned to walk the remains/personal effects through any remaining stations.
3. The Runner observes the following procedures:
   - Stays within view of the remains/personal effects while they are processed or transfers temporary custody of them if required to leave the remains/personal effects for any reason.

- Ensures that the [AGENCY] and appropriate DMORT staff signs the Human Remains/Personal Effects Removal Form AFTER all Stations have completed their analysis.
- Copies the remains file, including the Human Remains/Personal Effects Removal Form, for DMORT records.
- Hand-delivers the copied file to the Administration Supervisor for data input and permanent filing.

D16 Library Protocol

D16.1 General

1. All antemortem data, except dental, are entered at the Family Assistance Center (FAC). Information being generated at the FAC will be merged into the computer at the Information Resource Center (IRC).
2. All postmortem folders are data entered and filed at the IRC. All charts must be signed in and out.
3. All antemortem records are to be filed at the IRC and must be signed in and out.

D16.2 Antemortem Records – Dental and Medical

1. All dental and medical records are logged in at the IRC. Faxed records are received by [AGENCY] and recorded as received by the IRC. The records are held at the IRC until retrieved by the Antemortem Station Leader.
2. Antemortem dental records are entered in on the Antemortem Log and placed in the Unprocessed File Folder in the Antemortem Records File.
3. Antemortem dental records are charted according to the established Dental Protocol. Completion of charting is entered on the Antemortem Log. The records are then placed in the box labeled "To Be Entered in WinID."
4. After data entry, the records are filed numerically in the Antemortem File.
5. Completion of the data entry is entered on the Antemortem Log.

D16.3 Postmortem Records – Dental

1. All postmortem records are hand-carried from the Dental Station to the Dental ID office where they are entered onto the Postmortem Log and placed in the box labeled "To Be Entered in WinID."
2. After data entry, the records are filed numerically in the Postmortem File. Completion of the data entry is entered on the Postmortem Log.
3. All records must be signed in and out of central filing.

D16.4 File QA/QC Protocol

1. Unnecessary and/or blank forms are removed from the files.

2. Cross-check that human remains sampled for DNA analysis as indicated on the Victim Processing Record are listed on the master list compiled by the DNA Station
3. The files are reviewed to ensure that there are no discrepancies, inconsistencies, or omissions. If a problem is found, the following procedures are observed:
   - If a station has not signed the Victim Processing Record, the file is sent to the appropriate Station for signature.
   - If a station has not processed the human remains/personal effects, a blue sheet for the appropriate Station is labeled with a case number. The file with the blue sheet and the remains/personal effects are sent to the appropriate Station(s) for analysis.
   - If discrepancies are found between the Station analyses, a blue sheet is filled out indicating the nature of the discrepancies. The file is routed to the appropriate Station(s) for reanalysis and problem resolution.
   - If an inconsistency is noted between the scientific stations (i.e., Autopsy/ Pathology, Forensic Anthropology) and Radiology on the identification of the remains/personal effects, the Radiology Form is annotated with the identification provided by the Scientific Stations. This annotation is initialed and dated by the File QA team in the Administrations Station.
   - If an inconsistency is noted within a Station Report, a blue sheet is filled out noting the inconsistency and the file and/or remains/personal effects are routed to the appropriate Station for resolution.
4. If the remains/personal effects have already been positively identified before the QA assessment and not all stations have completed their analyses, the remains/personal effects are considered fully processed. The remains/personal effects are not re-routed for further analysis. The remaining stations are crossed off of the Victim Processing Record and initialed by the QA team.
5. A list is maintained of all files that are re-routed. As the files are returned to the QA team, they are crossed off the list if they pass the remaining QA standards.
6. Once files have been assessed for all QA standards and have passed all quality checks, a blue "Q" is written on the lower-right corner of the Victim Processing Record and marked off a master list indicating that the file has passed QA standards. The files are then sent to the Information Resource Center for copies to be made.
7. Once copies of the files have been made, any additions or changes must be made on orange (not blue) paper. The orange sheets are copied and filed in each copy of the files.

Site Recovery Record Form

VIP/DMORT Program
Site Recovery Record

Incident _____

PM Case #

To be used in the field to document original findings. Please insert into the appropriate Victim Disaster Packet

Please document all information. A proper positive identification begins NOW with YOU. NOT all fields will be appropriate for all situations. Please complete all that are appropriate AND PUT A LINE OR N/A in the ones that you have no information for:

Date of recovery _____ Time / 24hr _____
MM/DD/YYYY

Body Bag # _____ **GPS Location** PM_Place_Body_Found

Found In (Grid Number)

Condition of Remains ☐ No Major Outward Damage ☐ Burning/Charring present ☐ Water/Environmental Decay ☐ Obvious trauma ☐ Incomplete Remains

Position found in: _____

Field Comments

Do we have a presumptive identification? If so, who do you think this may be?
Please note in the field comments area WHY you believe this is a presumptive ID.

Last **First** (MM/DD/YYYY)

Number of Photo's Taken in the field:

Recovery Team Leader and members **(please list everyone on the team)**

Transported to Morgue By

Time Received at Morgue **Date** _____

Location of Remains at Morgue

VIP Program Provided thru the DMORT System

Tracking Form

VIP/DMORT Program

Tracking Form

Incident

To be attached to the front of each Disaster Victim Packet

PM Case #

Body Bag #

Open Field #

RFID #

Presumptive

SSN **DOB**

Last Name **First Name**

Person performing station function must check and sign below when completed.
"No" represents that this station function could not be performed.

Processing Station:		Rep Initial	Section Rep. Signature
Admitting	○ Yes ○ No		
Personal Effects	○ Yes ○ No		
Photography	○ Yes ○ No		
Body Radiography	○ Yes ○ No		
Fingerprints	○ Yes ○ No		
Anthropology	○ Yes ○ No		
Pathology	○ Yes ○ No		
Embalming	○ Yes ○ No		
DNA	○ Yes ○ No		
Dental Examination	○ Yes ○ No		
Dental Photography	○ Yes ○ No		
Dental Radiology	○ Yes ○ No		
Exit Morgue	○ Yes ○ No		

Date of Pathology Exam

Trackers Name

After Processing Location

Identification Method

- ☐ Anthropology
- ☐ Radiographic
- ☐ Dental Records
- ☐ Fingerprints
- ☐ Pathology
- ☐ Personal Effects
- ☐ Photography
- ☐ DNA
- ☐ Field Case Notes

Comments

This bag produced bag #'s:

Photo's

Number of Dental Photos

Number of Personal Effects Photos

Number of Specimen Photos

Also included in this file:

Created

PM Info #

VIP Program Provided thru the DMORT System

Personal Information Form (page 1 of 8)

VIP Personal Information

Page 1 of 8

Last Name / Suffix / First / Initial Sex If Female/Maiden Name Age

DOB MM / DD / YYYY Race Social Security # / Other Birth City State/Country Birth Hospital

Address Apt # City State Zip

County Country Inside City Limits Religious Preference

Education: level completed. Elem/Second (0-12): College Degree Earned:

Alias 1 Last First Middle Alias 2 Last First Middle

Phone (H) Phone (W) Phone (Cell)

Marital Status ○ Married ○ Never Married ○ Widowed ○ Divorced ○ Separated ○ Unknown Wedding Date (MM / DD / YYYY)

Spouse Last Suffix Maiden/Birth name First Middle ○ Living ○ Deceased ○ Unknown

Father Last Suffix First Middle ○ Living ○ Deceased ○ Unknown

Mother Last Maiden/Birth name First Middle ○ Living ○ Deceased ○ Unknown

Legal Next of Kin Last First Middle Home

Address Work

City State Zip On Site/Cell Phone

Relationship: ○ Wife ○ Husband ○ Father ○ Mother ○ Brother ○ Sister ○ Son ○ Daughter ○ Employer ○ Friend ○ Other

Permanent Contact

Please place name and contact info here. Please place other here.

Contact 1

Last / First Middle / Suffix

Address City State Zip

Home Phone Work Phone Cell Phone email

Date of Initial Contact Type of Initial Contact

Relationship: ○ Wife ○ Husband ○ Father ○ Mother ○ Brother ○ Sister ○ Son ○ Daughter ○ Employer ○ Friend ○ Other

Contact 2

Last / First Middle / Suffix

Address City State Zip

Home Phone Work Phone Cell Phone email

Date of Initial Contact Type of Initial Contact

Relationship: ○ Wife ○ Husband ○ Father ○ Mother ○ Brother ○ Sister ○ Son ○ Daughter ○ Employer ○ Friend ○ Other

Contact 3

Last / First Middle / Suffix

Address City State Zip

Home Phone Work Phone Cell Phone email

Date of Initial Contact Type of Initial Contact

Relationship: ○ Wife ○ Husband ○ Father ○ Mother ○ Brother ○ Sister ○ Son ○ Daughter ○ Employer ○ Friend ○ Other

Personal Information Form (page 2 of 8)

VIP Personal Information

Page 2 of 8

Name _____ / _____ / _____ / _____

Last | Suffix | First | Initial | Age

Height: _____ **Approx. Weight (Pounds):** _____

Hair Information

Hair Color ☐ Auburn ☐ Brown ☐ Gray ☐ Salt & Pepper ☐ Other ☐ Blonde ☐ Black ☐ Red ☐ White _____ Please place other here

Hair Length ◯ Bald ◯ Shaved ◯ Short < 3" ◯ Medium ◯ Male Patern Baldness: ◯ Long

Hair Accessory ☐ Extensions ☐ Hair Piece ☐ Hair Transplant ☐ Wig ☐ I

Hair Description ◯ Curly ◯ Wavy ◯ Straight ◯ N/A ◯ Other: ◯

Facial Hair Type ◯ Clean Shaven ◯ Beard & Moustache ◯ Goatee ◯ Sideburns ◯ N/A ◯ Moustache ◯ Beard ◯ Stubble ◯ Lower Lip

Facial Hair Color ◯ Blonde ◯ Black ◯ Red ◯ White ◯ Brown ◯ Gray ◯ Salt & Pepper ◯ NA

Facial Hair Notes _____

Eye Info

Eye Color ◯ Blue ◯ Green ◯ Gray ◯ Other ◯ Brown ◯ Hazel ◯ Black **Color/Descrip:** _____

Optical Lens ☐ Contacts ☐ Glasses ☐ Implants ☐ None **Desc.** _____

Eye Status ☐ Missing R ☐ Missing L ☐ Glass R ☐ Glass L ☐ Cataract ☐ N/A

NAIL Info

Fingernail Type ◯ Natural ◯ Artificial ◯ Unknown **Length** ◯ Extremely Long ◯ Long ◯ Medium ◯ Short

Fingernail Color **Description** _____

Characteristics ☐ Bitten ☐ Decorated ☐ Misshapen ☐ Yellowed/Fungus ☐ N/A

Toenail Color **Toenail description** _____

Characteristics ☐ Bitten ☐ Decorated ☐ Misshapen ☐ Yellowed/Fungus ☐ N/A

Body Piercing(s)? ◯ Yes ◯ No **Photos?** ◯ Yes ◯ No **Photo Location** _____

#	Location	Side	Quantity	Description (include evidence of old piercings)	Photo
1					
2					
3					

Tattoo(s) ◯ Yes ◯ No **Photos?** ◯ Yes ◯ No **Photo Location** _____

#	Location	Side	AM_Tat_Description
1			
2			
3			

Personal Information Form (page 3 of 8)

VIP Personal Information

Page 3 of 8

Name ____ / ____ / ____ / ____

Last Suffix First Initial Age

Dental Info

Dentist ____ (Last First) ○ Info Listed ○ Unknown ○ I

Address ____ Phone 1 ____

City ____ State ____ Zip ____

☐ Dental Work ☐ Partials ☐ Dentures ☐ Tooth Jewelry ☐ Both ☐ Braces

Additional Dental Information/2nd Dentist: ____

Physician Info

Physician ____ (Last First)

Address ____ Practice Name ____

Address 2 ____ Physician Type ____

City ____ State ____ Zip ____ Seen for ____

Phone 1 ____ Phone 2 ____ Records Requested ○ Yes ○ No

Email ____ Records Obtained ○ Yes ○ No

Medical Radiographs? Physician(s) ____

○ Yes ○ No ○ Unknown Address ____

Medical Radiographs Location	Potential Type of Radiographs - and dates taken if known

Old Fractures: ○ Yes ○ No Description: ____

Objects in Body: ☐ Pacemaker ☐ Bullets ☐ Implants ☐ Needles ☐ Shrapnel ☐ Other ____ (Please place other objects here)

Surgery ☐ Gall Bladder ☐ Tracheotomy ☐ Caesarean ☐ Reconstructive ☐ Other ____
☐ Appendectomy ☐ Laparotomy ☐ Mastectomy ☐ Open heart (Please place other surgery here)

Diabetic? ☐ Yes ☐ No ☐ Unknown If Female / pregnancy in the past 12 months ? ☐ Yes ☐ No ☐ Unknown

Unique Characteristics — Description of: Scars, Operations, birthmarks, burns, missing organs, amputations, other special characteristics

○ Yes ○ No ____

Prosthetic Location/Description

Prosthetic(s) ____

○ Yes ○ No

Additional Information

Personal Information Form (page 4 of 8)

VIP Personal Information

Page 4 of 8

Name _____ / ____ / _____ / _____ ____
Last Suffix First Initial Age

Group Status: ○ Alone ○ Group **Group Type:** Family, Church Group, Sports, Military **Fam/Grp Name:** If Family Group, list names here

Last seen with _____

Last location victim was seen _____

Military Service ○ Yes ○ No ○ Unknown **Military DNA Taken:** ○ Yes ○ No ○ Unknown

Country _____ **Service #:** _____

Approximate Service Date _____ **Military Branch** _____

Ever Finger Printed: ○ Yes ○ No **Immigration Status** _____ **Resident Alien Card (Green Card)** ○ Yes ○ No

☐ Fingerprints ☐ Footprints **Ever been Arrested** _____ **Arrested By:** _____

Print located _____

Usual Occupation: _____ **Type of Business** _____

Employer _____ **Phone** _____

Employer Address _____

Please list last employer if retired. Additional employers enter in additional data section

List memberships: Clubs, Fraternities, etc.

Additional Data

Personal Information Form (page 5 of 8)

VIP Personal Information

Page 5 of 8

Name _____ / _____ / _____ / _____ _____
Last Suffix First Initial Age

WATCH:

#	Type/ Make	Band Material/ Color	Description	Inscription Photo Available
1				◯ Yes ◯ No
2				◯ Yes ◯ No

Gold color is denoted by yellow, silver color is denoted by white

JEWELRY:

#	Jewelry/ Type/style	Material Color/ Stone Color	Size / Where Worn/ Frequently Worn?	Description	Inscription Photo Available
1			◯ Yes ◯ No		◯ Yes ◯ No
2			◯ Yes ◯ No		◯ Yes ◯ No
3			◯ Yes ◯ No		◯ Yes ◯ No
4			◯ Yes ◯ No		◯ Yes ◯ No
5			◯ Yes ◯ No		◯ Yes ◯ No
6			◯ Yes ◯ No		◯ Yes ◯ No
7			◯ Yes ◯ No		◯ Yes ◯ No
8			◯ Yes ◯ No		◯ Yes ◯ No
9			◯ Yes ◯ No		◯ Yes ◯ No

Other Commonly Carried Personal Effects _____

Cell phone ◯ *Yes* ◯ *No* ◯ *Unknown* **Cell phone type:** _____ **Service provider:** _____

Cell phone number _____ **Cell phone description** _____

Personal Information Form (page 6 of 8)

VIP Personal Information

Page 6 of 8

Name _____ / ____ / _____ / _____ ____

Last / Suffix / First / Initial / Age

CLOTHING:

#	Clothing Items	Color	Description	Size
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				

Wallet: Description

Contents

Purse: Description

Contents

Pockets:

Contents Left

Contents Right

Personal Information Form (page 7 of 8)

VIP Personal Information

Page 7 of 8

Name _____ / _____ / _____ / _____

Last **Suffix** **First** **Initial** **Sex**

Potential Living Biological Donors

All Biololgical Relatives of Missing Individual----Mother/Father/Spouse/Sister/Brother/Children/Uncle/Aunt/Cousin

1	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
2	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
3	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
4	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
5	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
6	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
7	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3
8	Last Name	First Name	Middle Name	Email		DOB	Sex	
	Relationship	Address	City	State	Zip	Phone 1	Phone 2	Phone 3

Primary donor for Nuclear DNA Analysis

An "appropriate family member" for **nuclear DNA Analysis** is someone that is biologically related to and only one generation removed from the deceased. The following are the family members who are appropriate donors to provide reference specimens, and in the order of preference (family members highlighted in bold print are the most desirable):

1. Natural (Biological) **Mother and Father**, AND 2. **Spouse** and Natural (Biological) **Children**, AND
3. A Natural (Biological) Mother or Father and victim's biological children, OR
4. Multiple Full Siblings of the Victim (i.e., children from the same Mother and Father)

Personal Information Form (page 8 of 8)

VIP Personal Information
Page 8 of 8

Name _____ / _____ / _____
Last First Middle

nterview_Location _____ Interview_Date _____ Interview_Time
(MM/DD/YYYY)

Interviewer Info:

Interviewer Name _____ _____
First Last

Interviewing_Organization _____

Interviewer **Home** Information

Interviewer Address: _____
Street, City State, Zip

Interviewer home phone: _____

Interviewer cell phone: _____

Interviewer work phone: _____

Interviewer **On-Site** Information

Interviewer on-site address _____
Street, Hotel, Room #

Interviewer on-site phone: _____

Interviewer on-site cell: _____

Reviewer Info:

Reviewer Name _____

Reviewer Signature _____

Reviewing agency _____

Clothing Inventory Form

VIP/DMORT Program

Clothing

Person Making Inventory _____

Incident _____

PM Case #

Date of Exam _____

Body Bag # _____ **Sex** _____

CLOTHING INVENTORY:

A= Data not available
B= Photo
C= Further information available

#	Clothing Items	Color	Description	Size

Dry Cleaning Marks Description	Laundry Marks Description

Wallet:

Description _____

Contents _____

Purse:

Description _____

Contents _____

Currency _____

Misc Items Found _____

Other Personal Effects _____

VIP Program Provided thru the DMORT System

Jewelry Inventory Form

VIP/DMORT Program

Person Making Inventory _____ **Jewelry Inventory**

Incident PM Case # _____

Date of Exam _____

Body Bag # _____

	#	Type Make	Band Material Face Color	Description	Inscription	A= Data not available B= Photo C=Other Info
WATCH						

	#	Jewelry/Type Style	Material Color Stone Color	Size	Description	Inscription	A= Data not available B= Photo C= Other Info
JEWELRY							

Use this Space for More Info Regarding Jewelry:

VIP Program Provided thru the DMORT System

Fingerprints Form

Fingerprint Specialist

VIP/DMORT Program
Fingerprinting

Incident

PM Case #

Date of Exam

Body #

Examiner 1

Examiner 2

Condition of Hands
(Burned, mutilated, etc)

Fingers Printed
(List Fingers Printed)

If not printed why?

Fingerprint Exam Notes

Footprint available ?

○ Yes ○ No

Footprint Location

VIP Program Provided thru the DMORT System

Radiology Form

VIP/DMORT Program
Radiology

Examining Radiologist _____

Incident _____

PM Case #

Date of Exam _____

Bag # _____ **Number of Images Taken:**

Radiology Technician:

Radiologist Findings: **Sex** ○ Male ○ Unknown ○ Female possible **Est Age** _____
○ Female ○ Male possible

Fractures:

☐ Cranium	☐ R Forearm	☐ L Hand	☐ L Upper Leg
☐ Mandible	☐ R Hand	☐ R Upper Leg	☐ L Lower Leg
☐ Torso	☐ L Upper Arm	☐ R Lower Leg	☐ L Foot
☐ R Upper Arm	☐ L Forearm	☐ R Foot	

Detailed Description of Fractures

Other Radiology Findings (Prosthesis, surgery, etc.)

Reviewed by: _____

VIP Program Provided thru the DMORT System

Pathology Form (page 1 of 3)

VIP/DMORT Program

Examining Pathologist _____ **Pathology** **Pg 1 of 3**

Incident _____ **PM Case #** _____ **Date of Exam** _____

Bag # _____ **Sex** ○ Male ○ Female ○ Unknown **Condition of Remains** _____

Est Race ○ Caucasoid ○ Asian ○ Hispanic ○ Negroid ○ American Indian ○ Unknown **Est Race Other:** _____ **Import Pictures**

Build ○ Gracile ○ Robust ○ Intermediate ○ Indeterminate **Height cm** _____ **Inches** _____ **Weight kg** _____ **Pounds** _____

Hair

Hair Color ○ Auburn ○ Black ○ Salt & Pepper ○ Blonde ○ Gray ○ White ○ Brown ○ Red ○ Other

Hair Length ○ Short ○ Long ○ Bald ○ Medium ○ Shaved ○ N/A

Hair Accessory ○ Extension ○ Hair Transplant ○ Hair Piece ○ Wig

Hair Description ○ Curly ○ Straight ○ Other ○ Wavy ○ N/A

Facial Hair ○ Beard ○ Beard & Moustache ○ Moustache ○ Clean Shaven ○ Goatee

Facial Hair Color ○ Blonde ○ Brown ○ Black ○ Gray ○ Red ○ Salt & Pepper ○ White

Facial Hair Type ☐ Clean Shaven ☐ Beard & Moustache ☐ Goatee ☐ Sideburns ☐ N/A ☐ Moustache ☐ Beard ☐ Stubble ☐ Lower Lip

Eye

Eyes ☐ Blue ☐ Green ☐ Grey ☐ Missing R ☐ Glass R ☐ Cataract ☐ Brown ☐ Hazel ☐ Blind ☐ Missing L ☐ Glass L

Optical ○ Glasses ○ Contacts

Nails

Finger Nail Type ○ Natural ○ Artificial ○ Unknown

Length ○ Extra Long ○ Long ○ Medium ○ Short

Fingernail Color _____ **Fingernails** ○ Bitten ○ Decorated ○ Mishapen ○ N/A

Toenail Color _____ **Toenails** ○ Decorated ○ Mishapen ○ Yellow/Fungus ○ N/A

List manufacturer, serial numbers, and other identifying features:

Prothestics _____

Teeth Present? ○ Yes ○ No **Dentures Present:** ○ Yes ○ No

Scars

☐ Scars (other than surgical) ☐ Birthmarks ☐ Deformities (non peri-mortem) ☐ Cardiac

Description _____
Scars _____
Birthmarks _____
Deformities _____
Cardiac _____

Surgery

☐ Gall Bladder ☐ Laparotomy ☐ Reconstructive
☐ Appendectomy ☐ Caesarean ☐ Open Heart
☐ Tracheotomy ☐ Mastectomy ☐ Other

Other Surgery _____

Description _____

Pathology Form (page 2 of 3)

VIP/DMORT Program

Examining Pathologist

Pathology
Pg 2 of 3

Incident _____

Date of Exam _____

Bag # _____ **Sex** ○ Male ○ Female ○ Unknown

Tattoo(s) ○ Yes ○ No ○ Unknown **Photos?** ○ Yes ○ No

#	Location	Side	Tatoo Description

Body Piercing(s)? ○ Yes ○ No ○ Unknown

#	Body Bag #	Location	Side	Quantity	Piercing Description

Objects In Body

☐ Pacemaker ☐ Prosthetic Devices ☐ Other
☐ Bullets ☐ Orthopedic devices

Other Object In Body

_____
_____

Wallet

Description _____

Contents _____

Purse

Description _____

Contents _____

Currency _____

Misc Items Found _____

Other Personal Effects _____

Pathology Form (page 3 of 3)

VIP/DMORT Program

Examining Pathologist _____ **Pathology** **Pg 3 of 3** **Incident** _____ **Date of Exam** _____

Bag # _____ **Sex** ○ Male ○ Female ○ Unknown **Specimen Wt** _____

Dimensions _____

Path Narrative:

Additional head and neck exam remarks:

Torso ○ Viscera Identifiable **Torso Remarks**

External Genitalia

- ☐ Male
- ☐ Female
- ☐ Indeterminate
- ☐ Circumcised
- ☐ Uncircumcised

Internal Genitalia

- ☐ Testis Left
- ☐ Testis Right
- ☐ Uterus
- ☐ Tubes Left
- ☐ Tubes Right
- ☐ Ovaries Left
- ☐ Ovaries Right

Extremity Remarks

Expanded Condition of Remains:

- ☐ Fresh
- ☐ Decomposing
- ☐ Burned
- ☐ Charred
- ☐ Cremains
- ☐ Distinct Marks
- ☐ Specific Trauma
- ☐ Floating (GPS)
- ☐ Submerged (Grid #)
- ☐ Scavenger Activity

VIP Program Provided thru the DMORT System

Anthropology Form (page 1 of 2)

VIP/DMORT Program

Examining Anthropologist | **Anthropology** | **Pg 1 of 2**

Incident _____

PM Case # _____

Date of Exam _____

Bag # _____ **Anthropology Condition of Remains:** _____

Anthropology estimated information in this area.

Estimate age: Age narrow lower	Age narrow upper	95% Lower limits:	95% Upper limits:	Anthro Sex
				☐ Male ☐ Unknown ☐ Female possible ☐ Female ☐ Male possible

Race / Skeletal

○ Caucasoid ○ Asian ○ Hispanic ○ Other
○ Negroid ○ American Indian ○ Unknown

Skeletal Robusticity

○ Gracile ○ Robust
○ Intermediate ○ Indeterminate

Stature (in Cm) _____

Missing Parts

☐ Intact Body	☐ Partial L Forearm
☐ Cranium	☐ L Hand
☐ Partial Cranium	☐ Partial L Hand
☐ Mandible	☐ R Upper Leg
☐ Partial Mandible	☐ Partial R Upper Leg
☐ Torso	☐ R Lower Leg
☐ Partial Torso	☐ Partial R Lower Leg
☐ R Upper Arm	☐ R Foot
☐ Partial R Upper Arm	☐ Partial R Foot
☐ R Forearm	☐ L Upper Leg
☐ Partial R Forearm	☐ Partial L Upper Leg
☐ R Hand	☐ L Lower Leg
☐ Partial R Hand	☐ Partial L Lower Leg
☐ L Upper Arm	☐ L Foot
☐ Partial L Upper Arm	☐ Partial L Foot
☐ L Forearm	

Unique Skeletal Features (Pathology, Healed Trauma, Non-metric Traits, Etc.)

☐ Intact Body	☐ Partial L Forearm
☐ Cranium	☐ L Hand
☐ Partial Cranium	☐ Partial L Hand
☐ Mandible	☐ R Upper Leg
☐ Partial Mandible	☐ Partial R Upper Leg
☐ Torso	☐ R Lower Leg
☐ Partial Torso	☐ Partial R Lower Leg
☐ R Upper Arm	☐ R Foot
☐ Partial R Upper Arm	☐ Partial R Foot
☐ R Forearm	☐ L Upper Leg
☐ Partial R Forearm	☐ Partial L Upper Leg
☐ R Hand	☐ L Lower Leg
☐ Partial R Hand	☐ Partial L Lower Leg
☐ L Upper Arm	☐ L Foot
☐ Partial L Upper Arm	☐ Partial L Foot
☐ L Forearm	

Anthro Sex Based On _____

Anthro Age Based On _____

Ancestry based on _____

Stature based on _____

Unique Skeletal Features _____

Anthropology Form (page 2 of 2)

VIP/DMORT Program

Examining Anthropologist **Anthropology** **Incident**

Pg 2 of 2 **Date of Exam**

Bag # **Anthropology Condition of Remains:**

Condition of Remains / Comments

Anthropology Report

Cause of Death

Manner of Death

Signature of Section Leader

VIP Program Provided thru the DMORT System

DNA Specimen Form

VIP/DMORT Program
AFIP/DNA Specimen

Incident
PM Case #
Date of Exam

Body Bag # _____ LISA ID # _____

Examiner 1 _____

Examiner 2 _____

Not Suitable For Typing - No Specimen Taken

If not, why? _____

Entire Specimen Taken ○ Yes ○ No

Portion of Specimen Taken (Include Size) _____

Description of Specimen Taken (Include Size) _____

DNA Hold Notes _____

Additional Information _____

VIP Program Provided thru the DMORT System

Information Collection Priorities

This appendix describes the Regional Information Collection Plan for the mass fatality response to a catastrophic earthquake. The plan describes the types of information necessary for senior leaders, emergency managers, and staff at the Cal EMA Regional Level and the Cal EMA State Level to understand the situation and make decisions regarding response priorities and resource allocations. **Table C-1** provides a chronological list of critical information that must be collected to support the response.

C1 Information Collection Priorities

The information plan for mass fatality operations reflects the following priorities:

C1.1 E to E+72 Hours

Information collection priorities for this phase are:

- Initial assessment of regional mass fatality operations
- Existing capabilities and anticipated and formally requested resource requirements
- Initial information about family assistance services

C1.2 E+72 Hours to E+14 Days

Information collection priorities for this phase are:

- New information regarding the status of regional mass fatality operations
- Information regarding the request, deployment, and integration of resources into the regional Operational Areas and the continued evaluation of capabilities and resource requirements
- New information about family assistance services

C1.3 E+14 Days to E+60 Days

Information collection priorities for this phase are:

- Information regarding any ongoing mass fatality operations in the region
- New information regarding the status of integrated State and Federal resources
- Continued evaluation of Operational Area capabilities and resource requirements

C2 Responsibilities for Information Collection and Dissemination

Regional responsibilities for information collection and dissemination as they pertain to the mass fatality response to the earthquake are as follows:

- The Operational Area EOC Coroner/Medical Examiner Unit Leader is responsible for coordinating and tracking the use and availability of coroner/medical examiner resources within the Operational Area and collecting information regarding ongoing mass fatality operations. Information on mass fatality operations is collected, organized, and sent to the Operation Area Planning Section for inclusion in the Operational Period Situation Report. The Operational Area EOC Coroner/Medical Examiner Unit Leader is also responsible for communicating requests for coroner/medical examiner resources to the Operational Area Coroner/Medical Examiner Mutual Aid Coordinator.
- The Operational Area Coroner/Medical Examiner Mutual Aid Coordinator is responsible for communicating providing information about resources requested by local governments within the Operational Area to the Operational Area Coroner/Medical Examiner Unit Leader.
- The Cal EMA Regional Level Coroner/Medical Examiner Unit Leader is responsible for tracking coroner/medical examiner resources and associated information received from the Operational Areas through the submission of situation reports and from the Region II Coroner/Medical Examiner Mutual Aid Coordinator as part of the formal mutual aid process.
- The Region II Coroner/Medical Examiner Mutual Aid Coordinator is responsible for providing information about resources requested by the Operational Areas to the Cal EMA Regional Level Coroner/Medical Examiner Unit Leader

C3 Critical Information Needs

Table C-1 provides list of critical information needs for the regional emergency coordination of mass fatality operations.

Table C-1. Critical information collection requirements for regional mass fatality operations.

	Critical Information	Specific Information	Methodology/Source	Responsible Entity	Product	Timeline
1	Initial Assessment of the regional situation specific to mass fatality incidents	Address or landmark describing each location where mass fatality operations are being conducted Estimated or confirmed number of deceased at each location Any unique challenges hindering the identification and recovery of remains Location of Incident Command Posts	Incident Command Situation Reports Media reports Operational Area Situation Reports GIS maps	On scene Coroner/Medical Examiner leader, Operational Area EOCs	Situation report Status briefing	Initial estimate within 4 hours; updated every operational period
2	Hazard-specific information Hazardous, toxic, and radiological issues Safety hazards	Presence and extent of fires Number/estimate of collapsed structures potentially requiring urban search and recovery Actual and potential releases of hazardous materials Personal safety issues and requirements Public health concerns	Incident Command Situation Reports Operational Area EOC situation reports	On scene Coroner/Medical Examiner leader, Operational Area EOCs	Situation report Status briefing Safety briefings/ messages	Initial estimate within 4 hours; updated every 12 hours
3	Weather	Post-incident forecast and implications for impeding operations	NWS	—	Status briefings Situation reports Daily intelligence summaries	As soon as possible after the event; ongoing, as required
4	Missing persons	Number/type of housing units in impacted areas Estimated number of people in damaged buildings Missing persons list	Facility, personnel, or resident rosters FACs Media reports Census data	Operational Area EOCs	Rosters Missing person reports	FACs should be established in the Operational Areas to take calls regarding missing persons. These operations should begin within the first 12 hours after the earthquake and continue for 24 to 48 hours.
5	Family Assistance Centers	Locations of FACs Services provided at each center Information about what to bring to the centers Sources of assistance outside FACs	Operational Area EOC situation reports Media reports NGO liaisons	Operational Area EOCs, Coroner/Medical Examiner	Status briefings Situation reports Daily intelligence summaries	FACs are activated throughout the region. Some are operated by Operational Areas, while a few are co-located with the regional incident morgues; activations occur within the first 72 hours
6	Predictive modeling	What HAZUS models show for damage impacts and casualties and fatalities	HAZUS outputs	—	GIS products	No later than 2 hours after event
7	Status of Coroner/Medical Examiner critical infrastructure and facilities	Status of Operational Area morgues Status of hospital morgues	Operational Area EOC situation reports Medical/Health DOC situation reports	—	Situation briefings Situation reports	Initial estimate within 4 hours; updated every 12 hours
8	Status of key personnel/ personnel issues	Staffing needs for response operations	Operational Area EOC reports Formal Mutual Aid requests	Operational Area Coroner/Medical Examiner, Mutual Aid Coordinator	—	Within 2 hours after disaster declaration; request made to the Region II Coroner/Medical Examiner as necessary
9	Status of key partner agencies in response	Vendors and government contractors NGOs with agreements	Contracts and agreements	—	Contract services Pre-arranged statements of agreement	Initial estimate within 4 hours

Table C-1. Critical information collection requirements for regional mass fatality operations.

Critical Information	Specific Information	Methodology/Source	Responsible Entity	Product	Timeline
10 Priorities for response—upcoming activities	Operational priorities Priorities: water, food, power, medical, search and recovery, communications	Operational Area EOC reports Field mass fatality response team reports Coroner/Medical Examiner	—	Situation briefings Situation reports	Initial estimate within 4 hours after event; updated every operational period
11 Questions the media may ask regarding Mass Fatality operations	How many deceased have been recovered at each location How long should the recovery take How many of the deceased have been positively identified How many of the deceased have been released	Incident Command Situation Reports Operational Area EOC Situation Reports	Coroner/Medical Examiner	Situation briefings Situation reports	Situation briefings occur twice a day, mornings and evenings, at the FACs; situation reports are submitted at the beginning of each operational period
12 Major issues/shortfalls	Actual or potential resource shortfalls of the affected Operational Areas Anticipated requirements Potential sources for filling resource shortfalls Resources available and locations of resources	Operational Area EOC reports Cal EMA State Level reports	—	Situation briefings Situation reports	Initial assessment within 4 hours after event; updated every operational period

Cal EMA = California Emergency Management Agency
EOC = Emergency Operations Center
FAC = Family Assistance Center
GIS = Geographic Information Systems
HAZUS = Hazards U.S.
NGO = nongovernmental organization
NWS = National Weather Service

Marin Operational Area Morgue Capacity (November 2012)

The Marin County Sheriff's Coroner Division is responsible for the recovery and handling of human remains following a mass fatality incident (MFI) in the Marin Operational Area (OA). The Coroner Division maintains a contract with **Monte's Chapel of the Hills** mortuary in San Anselmo, CA, for morgue services and facilities. The information below summarizes the Coroner Division's capabilities as provided through Chapel of the Hills.

Service Jurisdiction

Chapel of the Hills serves the entirety of the Marin OA. Additionally, the mortuary offers services to other jurisdictions throughout the San Francisco Bay Area.

Storage Capacity

On-site storage: A total of **32** individuals can be accommodated on site.
Off-site storage: A total of **80** individuals can be accommodated off site.

Cremation

The Coroner Division offers cremation capabilities through Chapel of the Hills, although the mortuary does not offer cremation services on site. Marin County also maintains a contract for cremation services with Mount Tamalpais Mortuary, through the indigent burial program, in the event of a MFI requiring involuntary mass cremation.

Embalming

Multiple mortuary facilities in the OA offer embalming services; the Coroner Division offers embalming solely through its contract with Chapel of the Hills.

Body Bags

In preparation for a major incident, the Coroner Division maintains an on-site cache of 200 body bags at all times and access to a greater supply within 24 hours, as needed.

Personal Protective Equipment (PPE)

The Coroner Division keeps an on-site supply of PPE sufficient for fatality recovery operations in the event of a MFI.

Vehicles

The County utilizes a local provider for the transport of decedents; the provider offers three vans for this purpose. The Coroner Division also owns a disaster trailer ready for dispatch to the scene of a MFI, as needed.

The information contained in this appendix should be verified and updated annually to ensure that the mass fatality management element of the Marin OA's incident response is based on current, accurate information. Failure to complete this update may reduce the effectiveness and efficiency of mass fatality management operations.

FAMILY ASSISTANCE CENTER (FAC) OPERATIONS

5.3.8.1 Family Assistance Center[6]

In the aftermath of a catastrophic earthquake, family and friends frantically seek assistance locating their loved ones. It is most common for family and friends to show up at places their loved ones are likely to have been at the time of the earthquake or to places that may have information about the injured or deceased. The establishment of a Family Assistance Center (FAC) provides for two critical needs: it keeps family and friends away from incident locations and hospitals, so first responders can conduct vital life-saving operations without interference, and it provides the communications and support services family and friends desperately seek.

Family assistance describes various programs that are provided in a central location to help immediate family, other relatives, and friends of those persons directly affected by the incident.

The term "family" is not limited to those with biological or marital ties. The term "family" applies to all persons with a common concern or love for the injured or deceased. This loosely defined term includes parents, siblings, grandparents, life partners, spouses, fiancées, children, long-term family friends, and even co-workers; those who support the immediate family and provide information to the various response agencies.

There are several goals of family assistance. The first goal is provide a uniform level of immediate help to all survivors and families. This begins with the establishment of a call center. The call center gathers information from callers and enters initial details about the deceased into an information database, sometimes referred to as an information path.

Family assistance includes notification of the deceased's involvement in the event, providing transport, food, and lodging at or near the disaster area, and establishing a family assistance center with screened and trained individuals that are trained in communication skills, have an understanding of the process, and understand how to work with families of those who have lost someone to a sudden, unexpected death.

The second goal of family assistance is to establish a system for local authorities to quickly collect information from the families of the deceased. This effort includes collecting DNA references from families, gathering dental and medical records, and

---

[6] The California Mass Fatality Management Guide: A Supplement to the State of California Coroner's Mutual Aid Plan, prepared by Cal EMA.

conducting detailed interviews about the deceased, and is often required to assist in the identification process.

The third goal of family assistance is to provide families with an understanding of what happens with regard to the deceased over the next few weeks and months. This is accomplished through a series of briefings conducted by local, State, and Federal government agencies, and/or the business involved, if the circumstance involves a transportation accident.

5.3.8.2 Site Selection

The traditional FAC is a secure facility established at a centralized location to provide information about missing persons who may be victims of the disaster. For the scenario earthquake over 7,000 fatalities are expected across multiple counties, requiring the establishment of multiple FACs. An FAC is established for each Regional Incident Morgue identified in **Section 5.3.6.4**.

Generally, the Operational Area Coroner/Medical Examiner is responsible for establishing the FAC. For the catastrophic earthquake scenario, the DMORT is responsible for operating Regional Incident Morgues. As part of that responsibility DMORT coordinates establishment of FACs near the Regional Incident Morgues.

The DMORTs coordinate with Operational Areas to identify facilities where both the Regional Incident Morgues and FACs can be established. The FACs should be close enough to the Regional Incident Morgues so that the Coroner/Medical Examiner can easily travel between the two, but not too close to expose friends and family to morgue operations.

5.3.8.3 Description of Rooms in the FAC

Operations Center: An operations center is needed to allow the different service groups and organizations to meet, coordinate, and plan. With all support agencies participating in the operations center, family services can be provided, information can be shared, messaging can be standardized, and services can be efficiently and effectively provided without duplication.

General Assembly Room: A general assembly room should be a large room with a public address system for the purpose of providing updates on the search and recovery process to large gatherings of family and friends. Depending on the amount of family and friends present at the FAC, updates should be given multiple times per day.

Reflection Room: A Reflection Room should be available for victims' families and friends to quietly reflect, meditate, pray, seek spiritual guidance, or observe religious practices. When preparing this space for use, every reasonable consideration should be made to respect diverse cultures and beliefs.

Death Notification Rooms: Several rooms should be designated to provide privacy and expedite the notification process. The rooms are to be used to make the notification to the next of kin, that their loved one has been positively identified. However, it is preferable that death notifications be made at the family's residence rather than requiring families come to the FAC.

Counseling Rooms: Several small rooms should be available to provide private space where information such as antemortem data can be gathered from families and where families can receive counseling from clergy and mental health professionals. Families need to be offered disaster mental health and spiritual support in a caring, compassionate, and protected environment. Here they can also receive information on the identification process and be interviewed for baseline information. These rooms can also be used by the family to make calls to other friends and family.

Medical Area: A mass fatality event is extremely traumatic and friends and family may experience health issues during their visits to the FAC. The medical area is designated as a place where people can receive medical assistance.

Reception and Registration for Families. When friends and family members arrive at the FAC, the staff should greet them and gather information about who is visiting the FAC. Staff assigns them an escort who takes them to a designated area where they may be more comfortable and can be located if necessary. When friends and family leave the FEC, they should check out and leave their address so that they can be contacted with additional information and support and notification of their loved ones death. When an adequate number of personnel are available, an escort may be assigned to each family group. Escorts may help the families with any need that arises during their time at the FAC. The American Red Cross and some private companies can provide personnel trained in counseling to offer escort services.

5.3.8.4 Functions of the FAC

The functions of the FAC are as follows:

- **Collect antemortem data**. Personnel at the FAC are assigned to collect accurate and detailed antemortem information from the friends and families of the victims. This information may be gathered by experienced death investigators or funeral directors who have been briefed on the information they need to collect from the friends and families. If funeral directors are providing this service, it is critical that they act as representatives of the Coroner/Medical Examiner's office and not as funeral directors. Funeral directors may be selected to perform this service for many reasons, including their training in collecting antemortem information and their experience in dealing with families in crisis.

Death certificate information can be collected at the initial interview to save the families from going through another interview at the funeral home. Many states require that similar information be provided on death certificates, including the deceased's occupation, level of education, and residency in the name of the informant (person providing the information). **Figure 5-4** presents the coordination of information between morgue operations and the FAC below for positive identification of the decedents.

- **Conduct death notifications**. The procedures for death notification are an important component of a sensitive family assistance plan. Whenever possible, death notification should be made by a team rather than an individual. The team may consist of a representative of the Coroner/Medical Examiner, a member of the clergy, a mental health professional, and possibly a medical professional. Some families may feel a notification team is not necessary, but other families may need the support. It is better to err on the side of having support persons present in case they are needed than to need them and not have them present. If the family's own pastor or other clergy member is present, the team clergy should play only a supportive role.

  The notification team should be well briefed on the information being provided to the families so they can answer as many questions as possible. The team should be given a fact sheet that contains relevant information that they can leave with the family for later reference, because family members may forget to ask questions at the time of the notification.

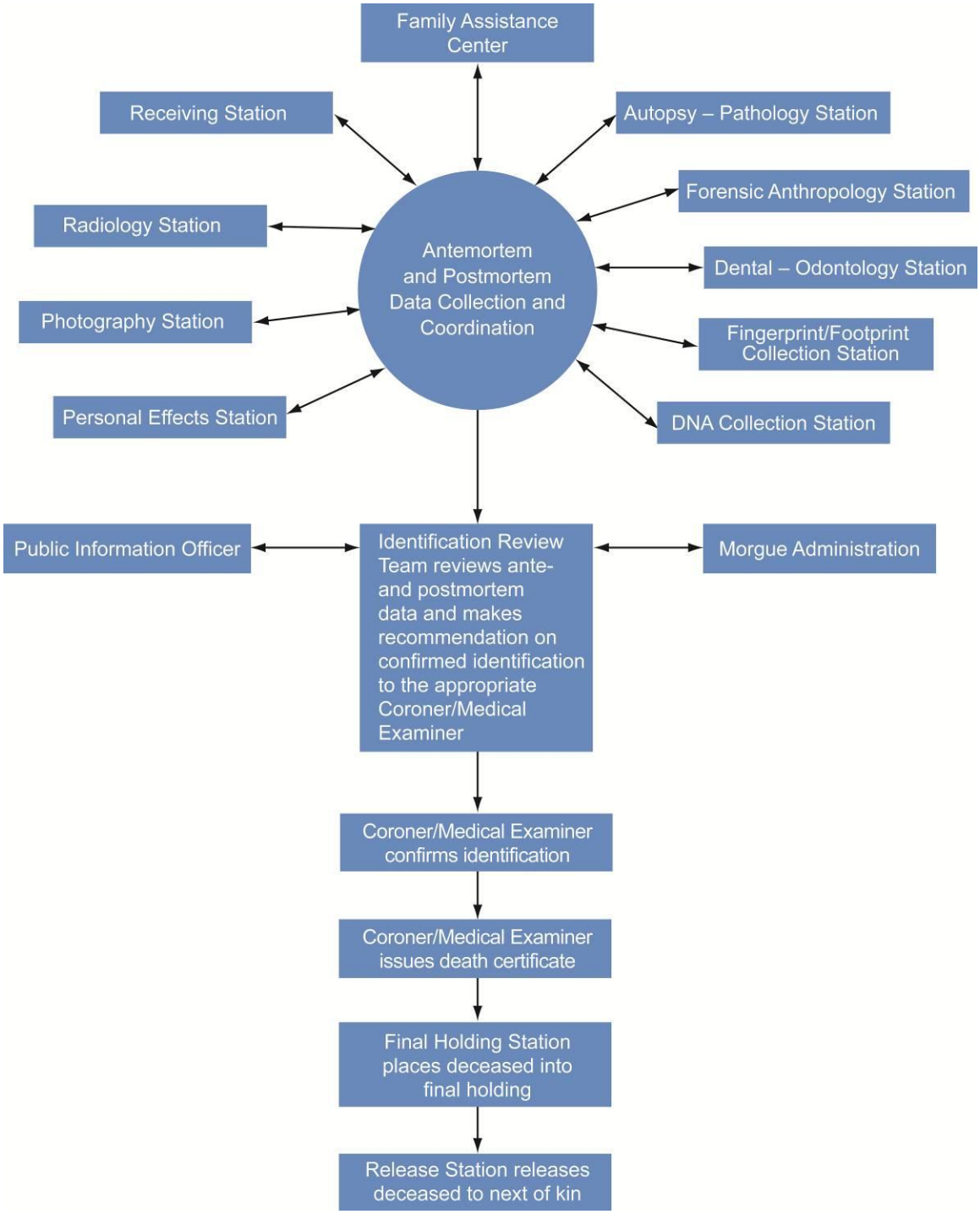


Figure 5-4. Antemortem/postmortem data collection and coordination.

Death notification teams also should be available to travel to meet with families who do not want to or are not physically able to come to the FAC. Next of kin who are out of town should always be notified in person. When a death notification must be made in a distant location, the office charged with death notification responsibilities can contact the sheriff or chief of police in the distant community to request coordination of notification. The American Red Cross or the State victim assistance agency can assist in providing a mental health professional. The office charged with death notification responsibilities can provide the notifying law enforcement agency with a letter from the Coroner/Medical Examiner that contains information about the deceased and the name and contact number for the Coroner/Medical Examiner in case the family has questions.

Staff conducting a death notification for a victim whose body is not intact must ask the family at the time of notification if they want to be informed about later identification of common tissue. Informing the family later about common tissue identification without their consent may be upsetting to them once they have buried their loved one. Families may prefer to be notified only about the memorial service and burial of the common tissue. After the family members make their decision, staff should provide them with a written copy of their decision as a reference for what they agreed to at that time. **Appendix D** contains a Remains Release Authorization Form, which is the formal mechanism for release of the decedent to the legal next of kin.

- **Establish and share victim's degree of suffering**. The issue of victims' suffering can cause tension. On the one hand, there is a need to preserve evidence that establishes the amount of suffering the victim endured for use at the perpetrator's sentencing hearing. On the other hand, there is great need to comfort families and answer their questions about how much their loved ones suffered before dying. During the recovery of bodies, the Coroner/Medical Examiner must sensitively convey information to families that is consistent with the information provided to the prosecution.
- **Implement security measures**. Access to the FAC must be controlled so families and friends of the victims have privacy and are not overwhelmed by the press, photographers, and the public. Checkpoints may need to be established at entrances to the FAC and its parking lot. A badging or credentialing system can be implemented that gives family members and authorized workers easy access to the FAC.

- **Disseminate public information and work with the media**.[7] The Coroner/Medical Examiner should designate a public information officer at the FAC to release information about the fatalities resulting from the earthquake. The press has questions that only a representative of the Coroner/M.E.'s office can answer properly, including questions about the recovery operation, identifications, and condition of the bodies. Information must be released to the press only by the designated public information officer and not by any staff members of the Coroner/Medical Examiner office. The joint information center at the Cal EMA SOC or joint field office develops a strategy for disseminating information to the public, and as a standards rule no information should be released to the media unless it has been discussed with the families first.

[7] U.S. Army Research and Development and Engineering Command, Military Improved Response Program, Department of Justice, Office of Justice Programs, and Office of Domestic Preparedness, Capstone Document: Mass Fatality Management for Incidents Involving Weapons of Mass Destruction (2005).

Public Information and Communication

Protocols have been established for existing State and Federal systems for communications between the Operational Areas; regional, State, and Federal agencies; and other organizations engaged in the response. Disruptions caused by a disaster may make modifications to the protocols necessary. California has established essential communications support procedures between the Operational Area EOCs, Regional, State, and Joint State/Federal Emergency Operations Centers, and other State agencies to provide the information links for elements of the California emergency organization.

The existing capabilities are supplemented through the establishment of systems necessary to support incident-specific facilities such as the Regional Incident Morgues, county morgues, and FACs.

Details of the State and Federal emergency management communications systems are described in greater detail in the CONOP, Annex C, Operations, and the RECP Communications Subsidiary Plan.

4.2.1 Coroner/Medical Examiner Communication Systems

The Coroner/Medical Examiner relies on the use of cell phones and radios for their primary means of communication. After the earthquake, cell phone capabilities may be unavailable and radio repeater sites may experience disruption. The Coroner/Medical Examiner needs the support of alternative technologies such as satellite telephones and Radio Amateur Civilian Emergency Service. The Coroner/Medical Examiner can submit requests for communications support through the Logistics Section of the Operational Area EOC.

4.2.2 Public Information

During an emergency, affected local governments disseminate information about the emergency to keep the public informed about what has happened and the actions of emergency response agencies and to summarize the expected outcomes of the emergency actions. The initial information about fatalities is communicated to local government EOCs. It is then compiled and disseminated to the public through the Joint Information System.

4.2.2.1 Public Information Office

The Cal EMA Public Information Office coordinates the State's emergency public information efforts and provides support to other State agencies to ensure that the State government issues timely, clear, concise, consistent messages. For mass fatality management operations, information focuses on the number of fatalities by county and the number of people that are missing.

PUBLIC INFORMATION

The Cal EMA Public Information Officer at the Joint Cal EMA State and Federal Levels may disperse public information at the local government level when the local government agency is overwhelmed, critical information needs to be disseminated quickly, and/or multiple response agencies and levels of government are involved in the response effort, and consistent emergency information is critical.

4.2.2.2 Joint Information System

Under SEMS, public information is directly managed and controlled by the jurisdictions within each SEMS level as a JIC. Collectively, the activated JICs form the Joint Information System that coordinates and communicates public information to numerous audiences in an accurate, timely, accessible, and consistent manner.

The JIC is a central location that facilitates operation of the Joint Information System and where personnel with public information responsibilities perform critical emergency information functions, crisis communications, and public affairs functions. When a JIC is established, it is staffed with Public Information representatives from the responding agencies, who coordinate as a team to:

- Gather, verify, and produce information for dissemination to the media and general public (such as news releases, background information, fact sheets, public-service announcements, briefings, and news conference materials)
- Respond to media questions and requests
- Schedule media releases, briefings, news conferences, interviews, and public service announcements
- Assign agency representatives to coordinate information from their agencies with other team members before it is released to the public.

The Coroner/Medical Examiner for each county tracks the number of deceased and provides information to the Operational Area JIC. The following information should be provided to the public:

- Location(s) of FACs
- Type of services the FACs provide
- Number of fatalities
- Information that assists Coroners/Medical Examiners

4.2.3 Intelligence and Information Sharing

"Intelligence" can be defined as information with value or critical information. To be useful to decision makers, information must be tailored to meet articulated requirements. To become intelligence, information must be collected, analyzed, vetted, and disseminated in a timely fashion. It should be provided to decision

makers in a simple, understandable, and focused manner. Intelligence collection and analysis are among the most critical components of formulating an effective response to a catastrophic incident.

After a catastrophic earthquake, the degree to which key decision makers at all levels of government and within interagency structures are able to gain and maintain situational awareness on the scene determines, to a great degree, their ability to anticipate requirements and provide appropriate resources. Real-time situational awareness also facilitates timely and knowledgeable information sharing with elected and appointed officials, the media, and general public. It is also imperative that leaders at all levels of government and within the interagency structures not only have the same information but also focus on obtaining and maintaining situational awareness based on established priorities. See **Appendix C, Table C-1,** for a list of critical information, sources of information, and agencies responsible for information collection in support of mass fatality management operations.

Family Assistance Center PIO Support

- **Disseminate public information and work with the media**.[8] The Coroner/Medical Examiner should designate a public information officer at the FAC to release information about the fatalities resulting from the earthquake. The press has questions that only a representative of the Coroner/M.E.'s office can answer properly, including questions about the recovery operation, identifications, and condition of the bodies. Information must be released to the press only by the designated public information officer and not by any staff members of the Coroner/Medical Examiner office. The joint information center at the Cal EMA SOC or joint field office develops a strategy for disseminating information to the public, and as a standards rule no information should be released to the media unless it has been discussed with the families first.

[8] U.S. Army Research and Development and Engineering Command, Military Improved Response Program, Department of Justice, Office of Justice Programs, and Office of Domestic Preparedness, Capstone Document: Mass Fatality Management for Incidents Involving Weapons of Mass Destruction (2005).

4.5 Transition to Long-Term Operations

In **Table 5-1, Response Timeline**, mass fatality operation events, tasks, and decision points are identified and listed chronologically. The timelines covers all activities from the event until 30 days after the event. Due to the catastrophic nature of the earthquake, it is assumed that mass fatality operations will continue past 30 days. At some point in the response, it will be necessary to plan for the transition to long-term mass fatality operations.

The primary considerations when planning for the transition are as follows:

- Deactivation of supporting operations such as the Regional Morgue
- Possibility of discovering additional remains
- Continuation of Family Assistance Services
- If remains were temporarily interred, the movement of remains to their final resting places in cemeteries
- Development and construction of memorials/monuments
- Repatriation
- Replacement of supplies and equipment
- Reconciliation of death certifications with insurance companies
- Provide Critical Incident Stress Management for staff
- Cleaning temporary and permanent facilities used to process human remains
- Determination of when funeral homes and mortuaries can resume normal operations
- Finalization of personal effects
- Process record-keeping for financial purposes and for the potential of reimbursement by the Federal government
- Conduct after-action review of operations and make necessary alterations to the plan.

In addition to the above long-term responsibilities, consideration should be made for conducting a region-wide analysis of mass fatality operations, which should include participation from the State and Federal agencies that participated in the response.