
CAÑADA COLLEGE

Volume Three

SEMS BASIC PLAN

January 2006



Disclaimer

The material presented in this publication has been written in accordance with federal and state guidelines to meet current industry standards. However, this plan cannot anticipate all possible emergency events and situations or emergency responses. Therefore, it should not be used without competent review, verification, and correction (where appropriate) by qualified emergency management professionals. It should be tested by the Emergency Operations Center (EOC) team after they have received appropriate emergency management training. Conditions will develop in operations where standard methods will not suffice and nothing in this manual shall be interpreted as an obstacle to the experience, initiative, and ingenuity of the officers in overcoming the complexities that exist under actual emergency conditions. Users of this plan assume all liability arising from the plan's use.

The Emergency Management Consultant's Emergency Operations Plan ©
Prepared for Cañada College

by:

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EXECUTIVE SUMMARY

BACKGROUND

The Cañada College Emergency Operations Plan (EOP) describes how the College will manage and coordinate resources and personnel responding to emergency situations.

The EOP contains three volumes. It is designed to meet both California and Federal Plan requirements. The plan

- Conforms to the Standardized Emergency Management System (SEMS),
- Provides Emergency Operations Center (EOC) responders with procedures, documentation, and user friendly checklists to effectively manage emergencies, and
- Provides detailed information of supplemental requirements such as Public Information, Damage Assessment, and Recovery Operations.

The Cañada College Emergency Operations Plan is a document that will be continually evolving. Recommendations for improvement are solicited and will be carefully considered for future revisions.

ORGANIZATION OF THE CAÑADA COLLEGE EMERGENCY OPERATIONS PLAN

The Cañada College Emergency Operations Plan is composed of Volumes One Immediate Action and Event Specific Checklists, Volume Two EOC Guidebook and Section Checklists, and Volume Three Cañada College SEMS Basic Plan. The three volumes provide a comprehensive emergency response document that include detailed information covering Emergency Operations Center procedures, documentation, and reference and support information.

VOLUME ONE - IMMEDIATE ACTION AND EVENT SPECIFIC CHECKLISTS

Immediate Action Checklists

This section provides guidelines on Crisis Action Team and Emergency Operations Center activation plus provides contact lists for activation of the EOC and coordination of the initial emergency response.

Event Specific Checklists

This section provides guidelines on *event specific* emergencies and the recommended response actions by management, faculty and staff.

VOLUME TWO - EMERGENCY OPERATIONS CENTER GUIDEBOOK AND SECTION CHECKLISTS

Immediate Action Checklists

This section provides guidelines on Crisis Action Team and Emergency Operations Center activation plus provides contact lists for activation of the EOC and coordination of the initial emergency response.

Executive Summary

This section provides a quick overview of the Emergency Operations Plan (EOP) and how to use the plan.

Chapter One - Emergency Operations Center (EOC) Activation Procedures

This chapter provides general material on *Who, What, When, Where* and *How* to activate the Cañada College Emergency Operations Center. Additional information is provided on the Cañada College Crisis Action Team, the Standardized Emergency Management System (SEMS), and EOC organization and responsibilities.

Chapter Two - Emergency Operations Center (EOC) Section Checklists

This chapter contains Emergency Operations Center section specific information including section overview information and individual EOC position checklists. The EOC section chiefs are responsible for ensuring each member within their section reads and follows the checklist for their position. The operations section has supplemental event specific checklists for law enforcement.

Chapter Three - Emergency Operations Center (EOC) Documentation

This chapter provides Emergency Operations Center support documentation and essential information used in the completion of individual and section responsibilities. The accurate completion of this documentation is essential for the timely dissemination of information within and between EOCs and to help with cost recovery after the response is completed. Section chiefs are responsible for ensuring that all personnel understand and utilize the documentation.

Note: During the initial response, the completion of documentation is not more important than responding to save lives and property. However, as the initial response is completed and additional responders assume their positions in the EOC, accurate completion of documentation must commence.

VOLUME THREE - CAÑADA COLLEGE SEMS BASIC PLAN

The primary purpose of the Volume Three - Cañada College SEMS Basic Plan is to provide a separate document of reference information. This reference information is recommended by federal and state authorities to be included in emergency plans but is not normally utilized by either the Crisis Action Team or Emergency Operations Center responders. The SEMS Basic Plan is provided in a separate document to simplify, as much as possible, time sensitive response operations and to reduce the size of an emergency plan utilized during these operations.

☐ Executive Summary and Forward

This section provides a quick overview of the Emergency Operations Plan (EOP) and how to use the plan plus provides background information and assumptions relating to the Cañada College emergency response operations.

☐ Chapter One - Basic Plan

This chapter provides supplemental detailed information related to plan assumptions, goals, training, and exercises. It also discusses plan maintenance, preparedness elements, the Standardized Emergency Management System (SEMS) and Incident Command System (ICS). Finally it reviews procedures for alerting and warning, continuity of operations, awareness and education, and hazardous materials response.

☐ Chapter Two - Authorities and References

This chapter contains federal, state, and city authorities that provide the legal basis for the Cañada College Emergency Operations Plan.

☐ Chapter Three - Threat Summary and Assessments

This chapter provides threat summaries and hazard analysis for Cañada College.

☐ Chapter Four - Recovery

This chapter provides detailed information relating to federal, state, and local jurisdiction recovery categories and procedures.

☐ Appendices

Appendix A - Glossary of Terms

Appendix B - Acronyms and Abbreviations

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FORWARD

BACKGROUND

This Emergency Operations Plan (EOP) addresses Cañada College's planned response to extraordinary emergency situations associated with natural disasters and technological incidents. The plan does not address normal day-to-day emergencies or the well-established and routine procedures used in coping with such emergencies. Instead, the operational concepts reflected in this plan focus on potential large-scale disasters which can generate unique situations requiring expanded emergency responses. Effective response requires that the College EOC responders remember to communicate, collaborate, coordinate, and cooperate with each other and with the field responders and other jurisdictions.

This plan is a preparedness document designed to be read, understood, and exercised prior to an emergency. It is designed to include Cañada College as part of the California Standardized Emergency Management System (SEMS) and Incident Command System. For area-wide emergencies such as a major earthquake it becomes part of the City of Redwood City and San Mateo County emergency response.

Each element of the emergency management organization is responsible for assuring the preparation and maintenance of appropriate and current standard operating procedures (SOPs), resource lists and checklists that detail how assigned responsibilities are performed to support the EOP implementation and to ensure successful response during a major disaster. These SOPs should include the specific emergency authorities that officials and their successors assume during emergency situations.

ASSUMPTIONS

- Cañada College is primarily responsible for emergency actions within its property and will commit all available resources to save lives, minimize injury to faculty, staff and students of Cañada College, and minimize property damage.
- Cañada College will utilize SEMS in emergency response operations.
- The Director of Emergency Services will coordinate the disaster response in conformance with Cañada College emergency response policy.
- Cañada College will coordinate emergency response with Redwood City and San Mateo County.
- The resources of Cañada College may be made available to other local colleges or universities, jurisdictions and/or citizens to cope with disasters.
- Cañada College will commit its resources to a reasonable degree before requesting mutual aid assistance.
- Mutual aid assistance will be requested when disaster relief requirements exceed the College's ability to meet them.
- This EOP does not guarantee a perfect response for all situations. The plan outlines hazards that are treated as hypothesis rather than fact and identifies recommended guidelines to coordinate response activities.
- The EOP is NOT intended for day-to-day emergencies, but rather for disaster situations where normal resources are exhausted or have reached very low levels.

EMERGENCY MANAGEMENT GOALS

- Provide effective life safety measures and reduce property loss
- Provide for the rapid resumption of Cañada College classes and services
- Provide accurate documentation and records required for cost recovery efforts

ACTIVATION OF THE EMERGENCY OPERATIONS PLAN

- The EOP can be activated on the on the order of any member of the College Crisis Action Team. (Volume Two, Chapter 1, page 4 •Who can Activate).
- When the governor has proclaimed a state of emergency in an area including Cañada College.

HAZARDOUS MATERIALS

The Office of Safety and Risk Management as well as Integrated Waste Utilization (IWU), the Redwood City Fire Department, and the South County Fire Department Fire Department Hazardous Materials Response Teams are designated as the administering and response agencies for Hazardous Materials (HAZMAT) Response for Cañada College. (Volume One, Immediate Action and Event Specific Checklists, Hazardous Materials Incident).

APPROVAL AND PROMULGATION

This Cañada College EOP will be reviewed by the Business Office Manager and the Cañada College President. Upon completion of review and written concurrence by these individuals, the EOP will be submitted to the College President for approval.

TRAINING AND EXERCISES

Training and exercises are essential at all levels of government to make emergency operations personnel operationally ready. A goal of Cañada College is to train and educate College faculty and staff, emergency response personnel, and the students of Cañada College in emergency preparedness and response. The College Police have been detailed with the responsibility of coordinating and scheduling training for staff and exercising of the Cañada College EOP. It is the responsibility of the College Police Emergency Preparedness Coordinator to administer this training program. Training in the EOP should include plan orientation and EOC procedures training followed by a realistic EOC exercise program.

The best method for training emergency response personnel to manage emergency operations is through realistic exercises. An exercise is a simulation of a series of emergencies for identified hazards affecting the College. During these exercises, emergency response personnel are required to respond as though a real emergency had occurred. The exercises should be designed to provide personnel with an opportunity to become thoroughly familiar with procedures that will actually be used in emergency situations.

There are several forms of exercises that will be conducted:

- Tabletop exercises provide a convenient and low-cost method designed to evaluate policy, plans and procedures, and resolve coordination and responsibility issues. Such exercises are a good way to see if policies and procedures exist to handle certain issues.
- Functional exercises are designed to test and evaluate the capability of an individual function such as evacuation, medical, communications or public information.
- Full-scale exercises simulate an actual emergency. They typically involve the complete emergency management staff and field units and are designed to evaluate the operational capability of the emergency management system.

Cañada College will conduct regular exercises of this plan to train all necessary College staff in the proper response to disaster situations.

MAINTENANCE OF THE SEMS EMERGENCY OPERATIONS PLAN

The Cañada College Emergency Operations Plan will be reviewed annually to ensure that plan elements are valid and current. Each responsible Cañada College staff member will review and upgrade his/her portion of the Cañada College EOP and/or modify its SOP/EOP(s) as required based on identified deficiencies experienced in drills, exercises or actual occurrences. Changes in local government and College emergency response organizations will also be considered in the Cañada College EOP revisions. The Emergency Preparedness Coordinator is responsible for making revisions to the College EOP that will enhance the conduct of response and recovery operations. The College Business Officer will prepare, coordinate, publish and distribute any necessary changes to the plan to all College departments and other entities as shown on the distribution list on the Records Revision Page of this Emergency Operations Plan.

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Approval Date: _____

LETTER OF PROMULGATION

TO: OFFICIALS, FACULTY, STAFF AND STUDENTS OF CAÑADA COLLEGE

The preservation of life and property is an inherent responsibility of Cañada College Management. Cañada College has prepared this Emergency Operations Plan to ensure the most effective and economical allocation of resources for the protection of Cañada College staff and students in any emergency situation.

While no plan can prevent death and destruction during an emergency, good plans carried out by knowledgeable and well-trained personnel can and will minimize losses. This plan establishes the emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts of the emergency staff and service elements utilizing the California Standardized Emergency Management System (SEMS) and/or the Incident Command System (ICS).

The objective of this plan is to incorporate and coordinate all the resources, facilities, and personnel of the College into an efficient organization capable of responding to any emergency.

This SEMS Emergency Operations Plan is an extension of city, county, state and federal emergency plans.

The Cañada College President gives full support to this plan and urges all Cañada College faculty, staff and students, individually and collectively, to do their share in maintaining total emergency preparedness and response effort of the College.

Concurrence of this promulgation letter constitutes the adoption of the Standardized Emergency Management System (SEMS) and Incident Command System (ICS) by Cañada College. The Cañada College Emergency Operations Plan will become effective on approval by the College President.

Cañada College President

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RECORD OF REVISIONS

Date	Section	Page Numbers	Entered By
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SIGNED CONCURRENCE BY PRINCIPAL DEPARTMENTS

The _____ (Department) concurs with Cañada College’s SEMS Emergency Operations Plan. As needed, revisions will be submitted to the _____ (position title).

Signed _____
(Name) (Title)

(Department)

The _____ (Department) concurs with Cañada College’s SEMS Emergency Operations Plan. As needed, revisions will be submitted to the _____ (position title).

Signed _____
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(Department)

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Signed _____
(Name) (Title)

(Department)

The _____ (Department) concurs with Cañada College's SEMS Emergency Operations Plan. As needed, revisions will be submitted to the _____ (position title).

Signed _____
(Name) (Title)

(Department)

CHAPTER ONE

BASIC PLAN

PURPOSE

The SEMS Emergency Operations Plan (EOP) addresses Cañada College's planned response to emergencies associated with natural disasters and technological incidents. These documents provide an overview of operational concepts and identifies components of Cañada College's emergency response team established by the California Standardized Emergency Management System (SEMS) and Incident Command System (ICS).

AUTHORITIES AND REFERENCES

Disaster response and recovery operations will be conducted as outlined in Concept of Operations of this Chapter and in accordance with the enabling legislation, plans, and agreements listed in Volume Three, Chapter Two - Authorities and References.

PREPAREDNESS ELEMENTS

At Cañada College, planning ahead for emergencies is part of normal business planning and all members of the campus community share a responsibility for preparedness. An emergency can strike anytime or anywhere and a disaster will affect the entire College community. Cañada College places emphasis on several aspects of preparedness including:

- Conducting comprehensive emergency operations planning
- Training emergency response team personnel
- Providing faculty, staff, and student awareness training on emergency response
- Assuring the adequacy of resources to respond to emergencies

CONCEPT OF OPERATIONS

Operations during emergencies involve a full spectrum of response levels. Some emergencies will be preceded by a warning period which provides sufficient time to notify the College community and implement mitigation measures designed to reduce loss of life and property damage. Other emergencies occur with little or no advance warning, thus requiring immediate activation of the College Emergency Operations Plan and commitment of College response resources. The Cañada College emergency response team must be prepared to respond promptly and effectively to any foreseeable emergency.

CAÑADA COLLEGE EMERGENCY MANAGEMENT SYSTEM

Cañada College's emergency management system consists of four levels:

- "On-scene" (field response)
- Crisis Action Team
- Emergency Operations Center Response Team
- Policy/Advisory Group

The four management levels provide an efficient means of establishing and carrying out the different management and coordination activities required to:

- Coordinate College wide support of "On-scene" response personnel and equipment
- Manage and coordinate resources and mutual aid
- Coordinate response efforts with Redwood City and San Mateo

"On-Scene" or Field Response Level

The "On-Scene" or field response level is where emergency response personnel and resources, under the command of an appropriate fire or law enforcement authority, carry out tactical decisions and activities in direct response to an incident or threat. The Incident Command System is the "On-Scene" management structure used for emergency response. ICS, like SEMS, provides for five functions: Command (Incident Commander), Operations, Planning, Logistics, and Finance. Note: Tactical "On-Scene" response decisions are made at the field Incident Commander level - NOT in the EOC.

Crisis Action Team

Depending on the nature of the emergency, the Crisis Action Team can meet at the President's office or confer by telephone to make immediate decisions about an emergency response. The precise composition and activities of the Crisis Action Team will depend on the specific emergency circumstances and functions needed. Other Cañada College or assisting jurisdiction/agency representatives may be included in the Crisis Action Team discussions/meetings as needed. Standing members of the Crisis Action Team include several College officials:

- Cañada President *
- Vice President, Student Services
- Vice President, Instruction
- College Business Officer
- Supervisor of Campus Facilities

Any member of the Crisis Action Team may call a meeting or initiate a conference call. The Crisis Action Team records its decisions. Possible options may include:

- A decision to do nothing
- A decision to proceed with “watchful waiting” while being prepared to either meet again or mobilize the EOC in response to the situation
- A decision to partially activate the EOC
- A decision to fully activate the EOC

College Emergency Operations Center Response Team

The College Emergency Operations Center (EOC) Response Team coordinates the overall College emergency response and recovery activities utilizing the SEMS organization. SEMS, like ICS, provides for five functions: Management (Director of Emergency Services), Operations, Planning, Logistics, and Finance. Note: Tactical “On-Scene” response decisions are made at the field Incident Commander level - NOT by members of the EOC Response Team. The EOC provides a centralized location for the strategic decisions and planning for the College's various response and recovery activities.

Policy/Advisory Group – Emergency Preparedness Committee

The Policy/Advisory Group is made up of the members of the Cañada College Emergency Preparedness Steering Committee. The committee will convene when needed or at the request of College Administration. The committee may convene to develop executive level policies and/or facilitate multi-jurisdictional coordination. The committee can assist the Director of Emergency Services through advice and policy direction and by creating a conduit to other government officials and the public. In the event of a disaster the committee will meet at a location other than the EOC to avoid congestion and provide a secure quiet location for discussion of sensitive issues.

The Emergency Preparedness Committee may request assistance or advice from city or county officials. Any other city, county department/agency, or assisting organization (e.g, hospital, utility, etc.) may also be solicited for advice.

EMERGENCY RESPONSE PHASES

Emergency management activities are often associated with the four emergency management phases indicated below; however, not every disaster necessarily includes all phases.

Preparedness Phase

The preparedness phase involves activities taken in advance of an emergency. These activities develop operational capabilities and pre-established responses procedures to an emergency. These actions might include mitigation activities, emergency/disaster planning, training and exercises, and faculty, staff, and student preparedness education. Those faculty and staff identified in this plan as having either a primary or support roles relative to emergency response should review this EOP and prepare appropriate supplemental Standard Operating Procedures (SOPs)/ Emergency Operating Procedures (EOPs) and Checklists detailing personnel assignments, policies, notification rosters, and resource lists.

Increased Readiness

Increased readiness actions will be initiated after the receipt of a warning or the observation that an emergency situation is imminent or soon likely to occur. Actions to be accomplished include, but are not necessarily limited to the points listed below:

- Review and update of Emergency Operations Plans, SOPs/EOPs, and resources listings
- Dissemination of accurate and timely emergency public information
- Dissemination of accurate and timely emergency public information
- Inspection of critical facilities
- Recruitment of additional staff
- Mobilization of resources
- Testing warning and communications systems

Response Phase

Pre-Emergency

When a disaster is inevitable, actions are precautionary and emphasize protection of life. Typical responses might be as listed below:

- Evacuation of threatened populations to safe areas
- Advising threatened populations of the emergency and appraising them of safety measures to be implemented
- Advising the City of Redwood City and San Mateo County, The Cañada College President, and the Cañada College Board of Trustees of the emergency
- Identifying the need for mutual aid and requesting such through the City of Redwood City and San Mateo County Office of Emergency Services
- Request a emergency proclamation by local government authorities (City of Redwood City and San Mateo County)

Emergency Response

During this phase, emphasis is placed on saving lives and property, control of the situation, and minimizing effects of the disaster. Immediate response is accomplished on the College property by College resources and local government agencies (fire, law enforcement, EMS etc.). One of the following conditions will apply to the jurisdiction during this phase:

- The situation can be controlled without mutual aid assistance from outside Cañada College
- Evacuation of portions of Cañada College are required due to uncontrollable immediate and ensuing threats
- Mutual aid from outside Cañada College is required
- Cañada College is either minimally impacted or not impacted at all and is requested to provide mutual aid to other jurisdictions

The Cañada College emergency management organization will give priority to the following operations:

- Dissemination of accurate and timely emergency information and warning to the College community and the public
- Situation analysis
- Resource allocation and control
- Evacuation and rescue operations
- Care and shelter operations
- Restoration of classes and vital services

When College resources are committed to the maximum and additional resources are required, requests for mutual aid will be initiated through the City of Redwood City and San Mateo County Office of Emergency Services or County EOC. The Cañada College College Police will request or render mutual aid directly through established channels. Any action which involves financial outlay by the College or a request for military assistance, must be authorized by appropriate officials. If required, the California Office of Emergency Services may be requested by Los Angeles County to coordinate the establishment of one or more Disaster Support Areas (DSAs) where resources and supplies can be received, stockpiled, allocated, and dispatched to support operations in affected area(s).

Depending on the severity of the emergency, the Cañada College Emergency Operating Center (EOC) may be activated, and the City of Redwood City and San Mateo County will be advised. A state of emergency may be proclaimed at the city and/or county levels. Should a gubernatorial state of emergency be proclaimed, state agencies will, to the extent possible, respond to requests for assistance. These activities will be coordinated with the state OES director. State OES may also activate the State Operations Center (SOC) in Sacramento to support local jurisdictions and other entities in the affected areas and to ensure the effectiveness of the state's emergency response.

Sustained Emergency

In addition to continuing life and property protection operations, mass care, relocation, registration of displaced persons, and damage assessment operations will be initiated.

RECOVERY PHASE

As soon as possible, the state OES will bring together representatives of federal, state, county, and city agencies, as well as representatives of the American Red Cross, to coordinate the implementation of assistance programs and establishment of support priorities. The general public can obtain individual disaster assistance through the FEMA telephone coordination center by dialing (800) 462-9029 or (800) 462-7585 (for the hearing impaired).

The recovery period has major objectives that may overlap, including:

- Resumption of classes and other Cañada College services
- Restoration of essential utility services
- Permanent restoration of College property
- Identification of residual hazards
- Plans to mitigate future hazards
- Recovery of costs associated with response and recovery efforts
- Cleanup and waste disposal

MITIGATION PHASE

Mitigation efforts occur both before and following disaster events. Post-disaster mitigation is part of the recovery process. Eliminating or reducing the impact of hazards that exist within Cañada College that are a threat to life and property are part of the mitigation efforts. There are various mitigation tools:

- Coordination with local and state officials to change ordinances and statutes (zoning ordinance, building codes and enforcement, etc.)
- Structural measures
- Public information and community relations
- Land use planning
- Professional training

EMERGENCY LEVELS

The magnitude of the emergency will dictate the College response level. Response levels are used to describe the type of event, extent of coordination or assistance needed, and degree of participation from the College departments.

Readiness and Routine Phase - Normal Operations

At this level the Cañada College departments respond to daily emergency situations. Stand-by and activation procedures should be issued in advance of an anticipated or planned event.

Minor Emergency - Level One - Decentralized Coordination and Direction

A Level One emergency is a minor to moderate incident wherein College resources are adequate and available. The Cañada College EOC is not activated. Off-duty personnel may be recalled. College and/or City of Redwood City police, fire, public works, or medical responders use on-scene Incident Command System (ICS) procedures. Based on the type of emergency, the appropriate authority monitors the situation and provides assistance. The Cañada College Crisis Action Team may be formed to deal with Level One emergencies.

Moderate Emergency - Level Two - Centralized Coordination and Decentralized Direction

A Level Two emergency is a moderate to severe emergency in which College resources are not adequate and mutual aid may be required. Key management personnel from the involved departments will co-locate to provide College coordination. The Cañada College EOC may be partially or fully activated based on the severity of the situation. Off-duty personnel may be recalled. A local emergency and a state of emergency may be requested and the City Redwood City and/or San Mateo County OES will be notified. The City of Redwood City and/or San Mateo County EOCs may be activated or a request for the City of Redwood City EOC activation for purposes of co-location may be promulgated.

Major Emergency - Level Three - Centralized Coordination and Direction

A Level Three emergency is a major local or regional disaster wherein resources in or near the impacted area are overwhelmed and extensive county, state and/or federal resources are required. A declaration of emergency is usually issued at the state and federal levels. The overall response and early recovery activities will be managed from the City of Redwood City or San Mateo County EOC with the Cañada College EOC being activated based on the situation. Off-duty Cañada College response personnel will be recalled as required.

The Cañada College Emergency Operations Plan is based on the Standardized Emergency Management System (SEMS) and Incident Command System (ICS).

Cañada College has fully adopted the provisions of SEMS/ICS and requires its implementation at the Emergency Operations Center (EOC) and on-scene by all responders.

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

SEMS is the system required by Chapter 7 of Division 2 of the Government Code §8607. The standard organizational model is based on an approach called the Incident Command System (ICS) that was developed by fire departments to give them a common language when requesting personnel and equipment from other agencies and to give them common tactics when responding to emergencies.

The system is designed to minimize the problem common to many emergency response efforts--duplication of efforts--by giving each person a structured role in the organization, and each organization its piece of the larger response. The ICS can be used by any combination of agencies and districts in emergency response. It clearly defines the chain of command and limits the span of control of any one individual.

Why Use SEMS?

Per CCR, Title 19, §2401, SEMS is intended to standardize responses to emergencies involving multiple jurisdictions or multiple agencies. SEMS is intended to be flexible and adaptable to the needs of all emergency responders in California. SEMS requires emergency response agencies to use basic principles and components of emergency management including ICS, multi-agency or inter-agency coordination, the operational area concept, and established mutual aid systems. All State Agencies are required to use SEMS in all multi-jurisdiction or multi-agency operations. Local government (including special districts) must use SEMS by December 1, 1996 in order to be eligible for state reimbursement of response-related personnel costs pursuant to activities identified in CCR, Title 19, §2920, §2935, and §2930.

By standardizing key elements of the emergency management system, the SEMS is able to achieve the following goals:

- Facilitate the flow of information and resources within and between levels of the system
- Establish emergency communication system, channels, and contacts in advance
- Facilitate coordination among all responding agencies
- Improve mobilization, use and tracking of resources
- Manage priorities with limited resources

Per California Code of Regulations (CCR), Title 19, §2443(b), compliance with SEMS shall be documented in the areas of planning, training, exercises, and performance.

SEMS Definition of Special Districts

“Local Government” means local agencies as defined in Government Code §8680.2 and special districts as defined in CCR, Title 19, Division 2, Chapter 5, NDAA, §2900(y).

CCR, Title 19, Division 2, Chapter 5, NDAA, §2900(y) defines Special Districts as a “unit of local government in the state (other than a city, county, or city and county) with authority or responsibility to own, operate or maintain a project, including a joint powers authority established under CCR Section 6500 et seq., of the Code.”

For the purposes of SEMS, special districts are political subdivisions of the State of California with limited power. The Emergency Services Act defines a political subdivision as “any city, city and county, district or other local governmental agency or public agency authorized by law.” Broadly interpreted, this means virtually all forms of government including special districts come under some or all of the provisions of the Emergency Services Act and the Standardized Emergency Management System.

Elements of SEMS

Incident Command System

- Provides the foundation for SEMS
- Originally adopted for field response to multi-agency, multi-jurisdictional wildland fires
- Adopted by other disciplines such as law enforcement, emergency medical services, public works and others
- Utilizes management by objectives

Mutual Aid System

- Used by cities, counties, special districts and the state to voluntarily provide services, resources and facilities when needed
- Uses a neighbor helping neighbor concept
- Initially used by fire and law systems, expanded to include public works, medical, hazmat and others

Multi/Inter-Agency Coordination

- Coordinated decision-making among and between agencies
- Facilitates priority setting for resource allocation and response
- Facilitates communications and information sharing

Operational Area

- Government Code §8559(b) states that an “Operational Area” is an intermediate level of the state emergency services organization, consisting of a county and all political subdivisions within the county area.
- Government Code §8605 states that each county is designated as an operational area. The governing bodies of each county and of the political subdivisions in the county may organize and structure their operational area. The Operational Area may be used by the county and the political subdivisions comprising the Operational Area for the coordination of emergency activities and to serve as a link in the communications system during a state of emergency or a local emergency.
- Operational Areas are the link between local government (including special districts) and the OES regions for the purpose of managing resources and information exchange.

CAÑADA COLLEGE EMERGENCY MANAGEMENT ORGANIZATION

FUNCTION	RESPONSIBILITY
CRISIS ACTION TEAM	Made up of key College management personnel who will meet or confer by phone to: <ul style="list-style-type: none"> • Manage emergency themselves • Activate the EOC • Identify appropriate level of EOC activation • Manage emergency while EOC is being set up • Identify beginning and ending time of 1st operational period • Develop 1st operational period Objectives and Priorities
AFTER EOC ACTIVATION TRANSITION TO STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)	
POLICY/ADVISORY GROUP	Policy level management members (such as Emergency Preparedness Steering Committee) that provide policy guidance to the College President.
MANAGEMENT SECTION	This function provides the overall direction and sets priorities for an emergency.
OPERATIONS SECTION	This function coordinates the employment of College resources (law enforcement, fire/rescue, medical, etc.) to mitigate the effects of the emergency.
PLANNING/INTELLIGENCE SECTION *	This function gathers and assesses information and develops an EOC Action Plan. The EOC Action Plan sets the objectives for the operational period. The operational period is set by management.
LOGISTICS SECTION	This function provide facilities, services, personnel, equipment and supplies in support of EOC and field response operations.
FINANCE/ADMINISTRATION SECTION *	This function is responsible for all financial and cost analysis management.

Note: The titles “Planning/Intelligence” and “Finance/Administration” are shortened to “Planning” and “Finance” throughout the EOP for simplicity and to fit in the organization charts.

Organizational Structure

CCR, Title 19, §2403 specifies five levels of the SEMS organization, which are activated as necessary.

Field Response Level

Emergency response personnel with their resources, under the command of an appropriate authority, carry out tactical decisions and activities in direct response to an incident or threat. The use of ICS at this level is the standard (i.e. response to a fire, auto wreck, flood, etc.).

The use of SEMS is intended to standardize the response to emergencies involving multiple jurisdictions or multiple disciplines (i.e. fire services, law enforcement, medical, etc.). The agencies that participate in a unified command do not relinquish their jurisdictional authorities. They develop a single coordinated action plan for the agreed operational period through multi-interagency coordination.

Local Government Level

Local governments include cities, counties, and special districts. Some special districts, such as metropolitan water districts have county or multi-county scope of authority. Local governments manage and coordinate the overall emergency response and recovery activities within their jurisdiction.

CCR, Title 19, §2407 states that SEMS shall be utilized when the local government Emergency Operation Center (EOC) is activated and when a local emergency is declared or proclaimed. It also states that local government shall use multi-agency or inter-agency coordination to facilitate decisions for overall local government level emergency response activities.

The EOC is a centralized location for decision making relating to the College's emergency response. It can be a very elaborate facility or a conference room that is converted when needed. The EOC is where emergency response actions can be managed and resource allocations and responses can be tracked and coordinated with the field, city, operational area, and OES Region.

All local governments are responsible for coordinating field response level with other local governments and the operational area. Local governments are also responsible for providing mutual aid within their capabilities.

Operational Area Level

Operational Area (OA) means an intermediate level of the state's emergency services organization that encompasses the county and all political subdivisions within the county including special districts. SEMS regulations specify that all local governments within a county geographic area be organized into a single OA and that the county board of supervisors is responsible for its establishment. The OA coordinates information, resources, and priorities among local governments within the OA and serves as the coordination and communication link between the local government level and regional level.

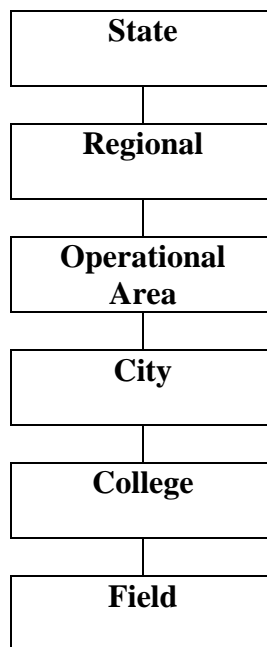
Regional Level

Due to size and geography, the state has been divided into six mutual aid regions to provide for a more effective application and coordination of mutual aid and other emergency related activities.

Information and resources among operational areas within the mutual aid region, and also between the OA and the state level are managed and coordinated at this level. If an Operational Area EOC is activated, the OES Regional Emergency Operations Center (REOC) will be activated to the level necessary to coordinate emergency operations and respond to requests for resources and mutual aid.

State Level

This level manages state resources in response to the emergency needs of the other levels and coordinates mutual aid among the mutual aid regions and between the regional level and state level. It serves as the coordination and communication link between the state and federal disaster response system. When an OES Regional Administrator activates a REOC, the State Operations Center (SOC) at OES headquarters will also be activated to support the region with state agency resources.



Involvement and Coordination

Universities are classified as *Special Districts* by the California Emergency Services Act. The emergency response role of special districts is generally focused on their normal services. During disasters, some types of special districts will be more extensively involved in the emergency response by assisting other local governments.

Coordination and communications should be established among special districts that are involved in the emergency response, and in other local governments, and the operational area. This may be accomplished in various ways depending on the local situation. Relationships among special districts, cities, county government, and the Operational Area are complicated by overlapping boundaries and by the multiplicity of special districts. Special districts need to work with the local governments in their service areas to determine how best to establish coordination and communications in emergencies.

The following discusses various situations and possible ways to establish coordination. The simplest situation is when a special district is wholly contained within a single city or within a county area. Usually in this case, the special district should have a representative at the EOC of the city or county in which it is located and direct communications should be established between the special district EOC and the city or county EOC. An exception may occur where there are many special districts within a large city or county.

Typically, special district boundaries cross municipal boundary lines. A special district may serve several cities and county unincorporated areas. Some special districts serve more than one county. Ideally, a special district involved in the emergency response will have representatives at all activated city or county EOCs within its service area. However, this may not be practical when many jurisdictions within its service area are affected. One alternative may be to focus coordination at the operational area level and designate a representative to the operational area EOC to work with other local government representatives at that EOC.

When there are many special districts within one city or within the county, it may not be feasible for the city or county EOC to accommodate representatives from all special districts during area-wide disasters. In such cases, the city or county should work with the special districts to develop alternate ways of establishing coordination and communications. There are several alternatives to consider:

- One representative from each type of special district who would communicate with other special districts of the same type.
- Representatives at the EOC only from designated key special districts-linked via telecommunications with other special districts.
- Establish a special district coordination center for a particular type of special district, such as a water district coordination center, that communicates with the jurisdiction EOC. This arrangement may be established for the Operational Area.

COMMUNICATION

Operational Area Satellite Information System (OASIS)

OASIS is an information and resource tracking system for Operational Areas. It was designed to facilitate the information flow between local governments, OA's, OES regions and the SOC through the use of a satellite information link. Effective coordination of emergency response and mutual aid within an OA will require the exchange of information between local governments and the OA.

Response Information Management System (RIMS)

RIMS is a set of applications designed by the Governor's Office of Emergency Services (OES) in Lotus Notes to assist in the management of disasters in California. The goal of the RIMS project is to connect, via computers, the five levels of government outlined in SEMS. RIMS is in use by all 58 Operational Areas (counties) and 30 state and federal agencies. OES is now fielding RIMS down to California's cities and is developing applications that can be used by emergency responders in the field.

RIMS has a set of reports available to all levels of government that categorizes disaster related information in a manner that quickly provides an overview of an event or multiple events. Because RIMS allows multiple users to submit and receive information on demand, it has dramatically improved the dissemination of disaster related information statewide.

RIMS has established an electronic link between agencies requesting assistance and agencies that can provide the needed resources. It allows Operational Areas to submit requests for emergency response assistance by computer to one of OES' three Regional Emergency Operations Centers (REOC). These REOCs then review the request and task the appropriate state agency to provide the requested assistance. The database is currently being modified so that it can be used by city and field level response organizations. (See Appendix A for Event/Major Incident Report.)

Special districts should report problems, needs, incident/status reports, etc. to the Operational Area (OA) within which they have a problem with their facilities. Special Districts may also report incidents to other locations in addition to the OA; for example, if they are a utility they may report to the Utilities Operations Center located at OES and they may also have reporting requirements to the Public Utilities Commission. If there is a disruption of services to a special district (for example, East Bay Municipal Utility District) they may also have to report to the OA where the service has been impacted in addition to reporting to the OA where the facility has been impacted. The Operational Area EOC may take care of the communications from the Special District to the cities, and to an OES REOC.

The special district may have entered into a mutual aid agreement with another special district. In this case, the district may request assistance directly in accordance with their agreement and also notify the OA of facility damage and/or service disruption. If they are a part of a statewide mutual aid system, they must follow the protocols of that particular system; for example, fire districts.

PLANNING

CCR, Title 19, §2445 states that local governments, operational areas, and state agencies shall include the use of SEMS in emergency plans and procedures pursuant to §2403, 2405, 2407, 2409, 2411, 2413 and 2415.

Special districts may be grouped together by the functions they were designed to perform, such as water purveyors, electric providers, schools, etc. An Emergency Operations Plan (EOP) should be developed to identify protocols for emergency coordinators of special districts to facilitate communications during emergency operations.

The following are some of the benefits a special district will have if it has an Emergency Operations Plan and coordinates with the OA:

- OA's needs to know what special district have or need in order to assist them
- Communication/Coordination is needed to expedite response and provide assistance
- Issues can be resolved prior to a disaster (i.e. pipe fittings, fire hydrant fittings)
- Clearinghouse to document damage/costs to prioritize damage assessment
- Compile information on resources to prioritize damage assessment
- Exercise with the EOC to identify needs
- SEMS Compliance

CONTINUITY OF OPERATIONS

A major disaster or national security emergency could result in the death or injury of key College officials and/or the partial or complete destruction of established facilities, and public and private records essential to continued operations. Faculty and staff are responsible for providing continuity of effective leadership, authority and adequate direction of emergency and recovery operations. College staff *Lines of Succession* list must be established and maintained. (Volume Two, Chapter 3, Tab 9)

Preservation of Vital Records

At Cañada College, the following offices are responsible for the preservation of vital records:

- The office of Admissions and Records
- The Personnel Office
- The Payroll and Benefits Office

Vital records are defined as those records that are essential to:

- Protect and preserve the rights and interests of individuals, governments, corporations and other entities. Examples include student records, payroll and other accounting records.
- Conduct emergency response and recovery operations. Records of this type include utility system maps, locations of emergency supplies and equipment, emergency operations plans and procedures, personnel rosters, etc.
- Reestablish normal governmental functions and protect the rights and interests of government. Constitutions and charters, statutes and ordinances, court records, official proceedings and financial records would be included here.

Vital records of the College are routinely stored electronically in secure off campus locations. College managers are responsible to ensure adequate maintenance of backup “essential records and information” to enable continued operations if the primary documents or information is lost.

Record depositories should be located well away from potential danger zones and/or housed in facilities designed to withstand blast, fire, water, and other destructive forces. Such action will ensure that constitutions and charters, statutes and ordinances, court records, official proceedings, and financial records would be available following any disaster. Each department within the College should identify, maintain and protect its own essential records.

CAÑADA COLLEGE STAFF AND STUDENT BODY AWARENESS AND EDUCATION

The College community's response to any emergency is based on an understanding of the nature of the emergency, the potential hazards, the likely response of emergency services, and knowledge of what individuals and groups should do to increase their chances of survival and recovery.

Awareness and education of the Cañada College faculty, staff, and students prior to any emergency are crucial to successful College information and response efforts during and after the emergency. The pre-disaster awareness and education programs must be viewed as equal in importance to all other preparations for emergencies and receive an adequate level of planning. These programs must be coordinated among local officials to ensure their contribution to emergency preparedness and response operations.

ALERTING AND WARNING

Warning is the process of alerting College responders and the faculty, staff, and student body to the threat of imminent extraordinary danger. Dependent upon the nature of the threat, warning can originate at either the College level or any level of government. Success in saving lives and property is dependent upon timely dissemination of warning and emergency information to persons in threatened areas.

Local government is responsible for warning the populace of the jurisdiction. Government officials accomplish this using warning devices located within the community or mounted on official vehicles. The warning devices are normally activated from a point staffed 24 hours a day.

There are various mechanical systems in place, described below, whereby an alert or warning may originate or be disseminated. Following the description of the systems is an explanation of the *Emergency Conditions and Warning Actions* through which these system may be accessed.

FEDERAL ALERTING AND WARNING SYSTEMS

EAS - Emergency Alerting System

The Emergency Alert System (EAS) is designed for the broadcast media to disseminate emergency public information. This system enables the president, federal, state, and local governments to communicate with the general public through commercial broadcast stations. This system uses the facilities and personnel of the broadcast industry on a volunteer basis. EAS is operated by the broadcast industry according to established and approved EAS plans, standard operating procedures, and the rules and regulations of the Federal Communications Commission (FCC). FCC rules and regulations require all participating stations within an EAS operating area to broadcast a common program. Each broadcast station volunteers to participate in EAS and agrees to comply with established rules and regulations of the FCC.

EAS can be accessed at federal, state, and local levels to transmit essential information to the public. Message priorities under Part 73.922(a) of the FCC's rules are as follows:

- Priority One - Presidential Messages (carried live)
- Priority Two – EAS Operational (Local) Area Programming
- Priority Three – State Programming
- Priority Four – National Programming and News

Presidential messages, national programming, and news will be routed over established network facilities of the broadcast industry. State programming will originate from the state operations center and will be transmitted throughout the state using the state's CLERS VHF/UHF radio relay stations.

Appropriate authorities at Cañada College can activate a warning using EAS through the Los Angeles County Office of Emergency Services. A representative for the Office of Emergency Services will make contact with the appropriate radio link.

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CHAPTER TWO

AUTHORITIES AND REFERENCES

PURPOSE

Emergency response, like all governmental action, is based on legal authority. The Cañada College Emergency Operations Plan follows state and federal guidelines for conducting emergency operations planning, training, emergency response, and recovery.

California Emergency Services Act

The California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code), hereafter referred to as the Act, provides the basic authorities for conducting emergency operations following a proclamation of *Local Emergency*, *State of Emergency* or *State of War Emergency* by the governor and/or appropriate local authorities, consistent with the provisions of the Act.

The Standardized Emergency Management System (SEMS) Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations), hereafter referred to as SEMS, establishes the SEMS to provide an effective response to multi-agency and multi-jurisdiction emergencies in California. SEMS is based on the Incident Command System (ICS) adapted from the system originally developed by the Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) program.

SEMS incorporates the use of ICS, the Master Mutual Aid Agreement and existing mutual aid systems, the Operational Area concept, multi-agency or inter-agency coordination and OASIS.

The California Emergency Plan, which is promulgated by the governor, is published in accordance with the Act and provides overall state-wide authorities and responsibilities, and describes the functions and operations of government at all levels during extraordinary emergencies, including wartime.

Section 8568 of the Act states, in part, that "the State Emergency Plan shall be in effect in each political subdivision of the State, and the governing body of each political subdivision shall take such action as may be necessary to carry out the provisions thereof". Local emergency plans are, therefore, considered to be extensions of the California Emergency Plan. The 1990 California Emergency Plan is generally compatible with SEMS but will be updated.

The California Civil and Government Codes contain several references to liability release (Good Samaritan Act) for those providing emergency services.

Emergency Proclamations

Local Emergency

A local emergency may be proclaimed by the Director of Emergency Services. The City and County should be notified immediately if a Local Emergency is proclaimed at Cañada College. The Local Emergency must be terminated as soon as conditions warrant. Proclamations are normally made when there is an actual incident or threat of disaster or extreme peril to the safety of persons and property within the jurisdiction, caused by natural or man-made situations.

The proclamation of a local emergency provides the governing body with the legal authority to take the following actions:

- If necessary, request that the governor proclaim a state of emergency.
- Promulgate or suspend orders and regulations necessary to provide for the protection of life and property, including issuing orders or regulations imposing a curfew within designated boundaries.
- Exercise full power to provide mutual aid to any affected area in accordance with local ordinances, resolutions, emergency plans, or agreements.
- Request state agencies and other jurisdictions to provide mutual aid.
- Require the emergency services of any local official or employee.
- Requisition necessary personnel and materials from any local department or agency.
- Obtain vital supplies/ equipment and, if required, immediately commandeer the same for public use.
- Impose penalties for violation of lawful orders.
- Conduct emergency operations without incurring legal liability for performance, or failure of performance. (Note: Article 17 of the Emergency Services Act provides for certain privileges and immunities).

State of Emergency

A state of emergency may be proclaimed by the governor in the following situations:

- Conditions of disaster or extreme peril exist which threaten the safety of persons and property within the state caused by natural or man-made incidents.
- He/she is requested to do so by local authorities.
- He/she finds that local authority is inadequate to cope with the emergency.

Whenever the governor proclaims a state of emergency:

- Mutual aid shall be rendered in accordance with approved emergency plans when the need arises in any county, city and county, or city for outside assistance.
- The governor shall, to the extent he deems necessary, have the right to exercise all police power vested in the State by the Constitution and the laws of the State of California within the designated area.
- Jurisdictions may command the aid of citizens as deemed necessary to cope with an emergency.
- The governor may suspend the provisions of orders, rules or regulations of any state agency; and any regulatory statute or statute prescribing the procedure for conducting state business.
- The governor may commandeer or make use of any private property or personnel (other than the media) in carrying out the responsibilities of his office.
- The governor may promulgate, issue and enforce orders and regulations deemed necessary.

State of War Emergency

Whenever the governor proclaims a state of war emergency, or if a state of war emergency exists, all provisions associated with a state of emergency apply. Additionally, all state agencies and political subdivisions are required to comply with the lawful orders and regulations of the governor which are made or given within the limits of his authority as provided for in the Emergency Services Act.

AUTHORITIES

The following provides emergency authorities for conducting and/or supporting emergency operations:

Federal

- Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended)
- Federal Response Plan
- Federal Civil Defense Act of 1950 (Public Law 920), as amended
- NRT-1, Hazardous Materials Emergency Planning Guide and NRT-1A Plan Review Guide (Environmental Protection Agency's National Response Team)
- Debris Removal Guidelines for State and Local Officials (FEMA DAP-15)
- A Guide to Federal Aid and Disasters (DAP-19)
- Digest of Federal Assistance (DAP-21)

State

- Standardized Emergency Management System (SEMS) Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations) and (Government Code Section 8607(a))
- Standardized Emergency Management System (SEMS) Guidelines
- California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code) "Good Samaritan" Liability
- California Emergency Plan, Rev. 1989
- California Natural Disaster Assistance Act (Chapter 7.5 of Division 1 of Title 2 of the Government Code)
- California Hazardous Materials Incident Contingency Plan
- California Health and Safety Code, Division 20, Chapter 6.5, Sections 25115 and 25117, Chapter 6.95, Sections 2550 et seq., Chapter 7, Sections 25600 through 25610, dealing with hazardous materials
- Orders and regulations which may be selectively promulgated by the governor during a state of emergency
- Orders and Regulations promulgated by the governor to take effect upon the existence of a state of war emergency
- California Master Mutual Aid Agreement
- California Code of Regulations §2400-2450 - Regulations establishing SEMS
- SEMS Guidelines - Guidance for emergency response agencies on planning, developing, operating and maintaining SEMS consistent with regulations.

- SEMS Approved Courses of Instruction - Training courses for emergency response personnel at field and emergency operations center (EOC) levels developed pursuant to SEMS Regulations. The approved courses include an Introductory course, field level course (incident command system), EOC course, and executive course.
- Emergency Planning Guidance for local government - Guidance document intended to provide local governments with tools to develop emergency plans.

COUNTY

- Emergency Services Ordinance No. 10493, approved by the Board of Supervisors (Chapter 2.68 of Title 2 of the Los Angeles County Code)
- Master Mutual Aid Agreement, adopted December 12, 1950 by the Board of Supervisors
- Resolution adopted on July 5, 1995 by the Los Angeles County Board of Supervisors forming the Los Angeles County Operational Area
- Resolution adopting the Los Angeles County Operational Area Emergency Response Plan, adopted February 17, 1998.

REFERENCES

Federal Response Plan (FEMA).

CHAPTER THREE

THREAT SUMMARY AND ASSESSMENTS SAN MATEO COUNTY

BACKGROUND

The following threat summaries are the product of a historical, meteorological, geographical, geological and visual assessment of San Mateo County. Natural and technological risks are described in gross terms for the San Francisco Bay Area with specific references to the San Mateo area, when appropriate. No order of importance is meant to be implied by the order of listing and this list is not meant to be all inclusive, but seeks only to identify the most likely risks with potential to impact the area. Threats to public health and safety covered in this document include:

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MAJOR EARTHQUAKE

GENERAL SITUATION

The State of California is one of the most active earthquake regions on the surface of the earth and, along with the State of Alaska, by far the most active region of the United States. California's geographic features are dominated by juncture of two of the world's tectonic plates. The long scarp where the North American plate meets to Pacific plate and either grind alongside each other or subduct one under the other side is the notorious San Andreas Fault which runs the entire length of the state, north to south. The San Andreas Fault is not the only fault system capable of causing considerable loss of life, property and environmental damage. The western half of the state, particularly in the southern and northern regions are honeycombed with smaller fracture faults and small to moderate independent fault systems each capable of causing significant damage. Over time, the theory of "small faults equals small earthquakes and larger fault systems equals proportionately larger quakes" has succumbed to research which indicates that small, independent fault systems are capable of "linking" together to produce significant earth movement.

Historically, there has been regular activity along these faults. In any given year, California experiences between 2,000 and 6,000 seismic events, however, most of these "shakers" are of low enough magnitude and surface effect as to go unnoticed. There have been significant events over the last couple of centuries, particularly in the southern and south-central section of the state.

CONSIDERATIONS FOR THE SAN MATEO COUNTY

San Mateo County is in the vicinity of several known active and potentially active earthquake faults. These include the San Andreas and the Hayward faults. New faults within the region are continuously being discovered. Scientists have indicated that there is a 66% chance of a major earthquake (magnitude 6.0 or greater) in the Bay Area within the next 30 years.

The San Andreas Fault

The San Andreas Fault is the best known earthquake fault system in the United States and a major element of California geology. It trends northwesterly and extends more than 800 miles from the Gulf of California to an area north of San Francisco. It has been the source of many very large earthquakes, the earliest recorded one occurring in October 1800 near San Juan Bautista. The San Andreas was the source of the 1857 Fort Tejon Earthquake, estimated at magnitude 8.2. The 1838 earthquake located on the peninsula south of San Francisco had an estimated magnitude in excess of 7.0. Accounts of the 1838 earthquake describe a large fissure extending from San Francisco to an area near San Jose. The San Francisco Earthquake of April 18, 1906, one of the worlds most famous and significant earthquakes, was the next strong shock along the San Andreas. The earthquake had an estimated magnitude of 8.3 and generated strong vibratory ground motions that caused damage throughout Northern and Central California. On October 17, 1989, a magnitude 7.1 earthquake occurred on the San Andreas fault east of Santa Cruz. Severe damage in the historic central business districts of Los Gatos, Santa Cruz, and Watsonville occurred as a result. This earthquake also produced moderate to severe structural damage throughout the Bay Area, and damaged essential transportation infra-structure (the San Francisco Bay Bridge and several elevated freeways in Oakland and San Francisco). Soft soil areas of San Francisco experienced very intense ground motion and liquefaction which resulted to the collapse of many buildings. With an estimated economic loss of more than \$6 billion and over 60 killed, this earthquake ranks as the worst natural disaster in the United States.

The Hayward Fault

The Hayward Fault is located on the eastern side of the San Francisco Bay - extending approximately 55 miles from San Jose northwesterly to San Pablo. It was the source of the Hayward Earthquake of 1836 which had an estimated magnitude of 6.8 - one of the largest ever recorded in Northern California. Recent studies indicate that fissures opened along the fault from San Pablo to Mission San Jose and that ground shaking caused damage in settlements at San Jose and Monterey. In 1868 another earthquake (with an estimated magnitude of 6.8) ruptured for 20 miles and severely damaged every building in the village of Hayward. More recent damaging earthquakes occurred in 1915, 1933, and 1937. The Hayward Fault is believed capable of producing earthquakes as large as magnitude 7.5 earthquake.

The Calaveras Fault

The Calaveras Fault is a major branch of the San Andreas Fault System. It splits from the San Andreas a few miles south of Hollister and extends approximately 80 miles to an area just north of Danville. From there, several branches continue northward. The Hayward and the Calaveras Faults intersect just south of Fremont. A number of earthquakes have occurred along the Calaveras, but none of these have approximated the magnitudes and intensities of earthquakes generated by the Hayward Fault. The strongest recorded tremor on the Calaveras was the 1861 Amador Valley Earthquake. It occurred near Dublin and produced a shaking intensity on Modified Mercalli scale of VIII. The April 24, 1994, Morgan Hill Earthquake had a magnitude of 6.2 and caused damage in Morgan Hill, Gilroy, and San Jose. The Calaveras Fault is estimated to be capable of producing a magnitude 7.2 earthquake

SPECIFIC SITUATION

An 8.3 magnitude earthquake on the northern San Andreas Fault (Exhibit 2) would result in serious damage in San Mateo County. The Modified Mercalli Intensity Scale (Exhibit 3) generally describes damage resulting from the shaking.

The information presented below provides detailed estimates of potential earthquake losses in San Mateo County from an 8.3 magnitude earthquake on the northern San Andreas Fault. The data is extracted from the following studies:

- A Study of Earthquake Losses in the San Francisco Bay Area, National Oceanic and Atmospheric Administration, 1972
- Open File Report 81_113, 1981, U.S. Geological Survey, Metropolitan San Francisco and Los Angeles Earthquake Loss Studies, 1980 Assessment
- Special Publication 61, 1982, California Division of Mines and Geology, Earthquake Planning Scenario for a Magnitude 8.3 Earthquake on the San Andreas Fault in the San Francisco Bay Area.

The potential hazards that San Mateo County may face in an earthquake are significant. Factors that will determine the loss of life and extent of damage include the following:

Casualties

Since studies only predict the total number of deaths and hospitalized injuries (exclusive of dam failures) for the entire San Francisco Bay Area, it is assumed that a proportionate number of casualties will be generated in San Mateo County. The total number of casualties projected in the event an 8.3 magnitude earthquake occurs at 4:30 p.m. (the time when the Bay Area rush hour traffic starts and many people are on the roads) follow:

Deaths				Injuries			
SCHOOLS	HOSPITALS	OTHER SOURCES	DEATH TOTAL	SCHOOLS	HOSPITALS	OTHER SOURCES	INJURY TOTALS
200	1,450	9,720	11,370	600	4,400	39,340	44,340

(Note: The ratio of non-hospitalized injuries to deaths is 30:1.)

Long-term homeless

There could be approximately 9,600 long-term homeless persons.

Dam Failure

Of the twenty dams in the county, thirteen are considered capable of causing injury and life loss in case of failure. The most serious potential failure would involve the Lower Crystal Springs Dam.

Ground Shaking

The most significant earthquake action in terms of potential structural damage and loss of life is ground shaking. Ground shaking is the movement of the earth's surface in response to a seismic event. The intensity of the ground shaking and the resultant damages are determined by the magnitude of the earthquake, distance from the epicenter, and characteristics of surface geology. This hazard is the primary cause of the collapse of buildings and other structures.

It is generally understood that an earthquake does not in itself present a seismic hazard, but that it becomes a hazard when it occurs in a highly urbanized area. Therefore, the significance of an earthquake's ground shaking action is directly related to the density and type of buildings and number of people exposed to its effect.

Liquefaction

Many areas may have buildings destroyed or unusable due to the phenomenon of liquefaction (Exhibit 2). Liquefaction is a phenomenon involving the loss of shear strength of a soil. The shear strength loss results from the increase of pore water pressure caused by the rearrangement of soil particles induced by shaking or vibration. Liquefaction has been observed in many earthquakes, usually in soft, poorly graded granular materials (i.e., loose sands), with high water tables. Liquefaction usually occurs in the soil during or shortly after a large earthquake. In effect, the liquefaction soil strata behave as a heavy fluid. Buried tanks may float to the surface and objects above the liquefaction strata may sink. Pipelines passing through liquefaction materials typically sustain a relatively large number of breaks in an earthquake.

Damage to Vital Public Services, Systems And Facilities*Bed Loss in Hospitals*

San Mateo County has nine major hospitals (99 beds or more) with a total capacity of 2,416 beds. Approximately 1,360 (56%) of the total number of beds could be lost during a major earthquake.

Several of the acute care hospitals in San Mateo County are expected to be lost due to structural damage. This will impair the number of beds available and create the need for several field hospitals. Most of the subscribing hospitals to the San Mateo County Department of Health will be controlled by the Department as to the availability of beds and transfer of patients.

Although a percentage of the remaining beds could be made available by discharging or transferring non-emergency patients, it will probably be necessary to receive an immediate influx of emergency medical aid and/or export some of the seriously injured to out-of-county facilities.

Damage to Highways*U.S. 101*

U.S. 101 would be closed for a major portion of the distance from Menlo Park to Candlestick Park and would not be opened within 72 hours. South of Candlestick Park to San Bruno, major land slips or movements would be distinctly possible in heavy ground motion. Major stretches of this portion of the freeway could be under water or badly damaged due to soil movements. Access to the San Francisco International Airport would be shut off and could be reestablished in about 48 hours using Route 82.

Route 1

The Devil's Slide area on the San Andreas Fault crossing near the intersection with Skyline Boulevard would be closed - even with moderate ground shaking. Landslides along the coast to the south would close the remainder of the route for at least 72 hours.

Route 82 (El Camino Real)

El Camino Real would be open but with many major detours and delays to avoid collapsed buildings and bridges. Most of the post-earthquake traffic would be on El Camino Real although damaged and/or destroyed culverts crossing underneath the roadbed may necessitate local traffic diversions.

Route 92

Highway 92 would likely be closed from Half Moon Bay to Route 280 due to slides and faulting and would not be opened within 72 hours.

Route 35

Route 35 would probably be closed and would not be opened within 72 hours. The northerly portion crosses the San Andreas Fault near King Drive (Daly City). There is significant landslide potential south of Route 84. Extensive damage would probably occur throughout the northern portion of this route due to fault ruptures.

Interstate 280

Interstate 280 would most likely be closed for less than 36 hours. Closed at Route 92 by a bridge collapse. A detour can be made around this area in 8 hours. Significant landslide hazard exists. Although this route will be unaffected by fault rupture, its proximity to the fault may subject it to other effects that are not predictable.

Interstate 380

Interstate 380 would be closed at U.S. 101 but open from Route 280 to Route 82. Low liquefaction potential exists. Detours can be made available around the affected interchanges.

Interstate 380/U.S. 101 Interchange

The 380/101 interchange would likely be heavily damaged and would remain closed for a period of 72 hours.

Airports

San Francisco International Airport (SFO) is expected to be closed for over 72 hours to several weeks. Practical land access will not exist due to freeway and highway damage which will effectively isolate the airport and nearby facilities.

Railroads

The Southern Pacific Railroad extends from San Jose to San Francisco. The line is expected to be closed until inspections can be completed which could take a few days.

Marine Facilities

Marine facilities at Redwood Creek will be closed.

Communications

Telephone systems will be affected by system failure, overloads, loss of electrical power and possible failure of some alternate power systems. Immediately after the event numerous failures will occur coupled with saturation overloads. This will disable up to 80% of the telephone system for one day. In light of the expected situation, emergency planners should plan for alternate communications for the first few days after the event.

Key communications system facilities are located near the San Andreas Fault in areas projected to experience intense ground shaking. It is likely that the telephone systems south of San Francisco will have systemic failures not readily bypassed by alternative traffic routing. It is also probable that the recovery effort will be delayed because many telephone company employees will have difficulty getting access to damaged areas to complete repairs.

Radio systems are expected to be 40 to 75% effective; microwave systems, 30% effective or less. Radio systems will generally operate at 40% effectiveness for the first 12 hours after the earthquake; increase to 50% for the second 12 hours; then begin a slow decline to approximately 40% within 36 hours. The decline in radio systems is primarily due to fuel limitations for emergency generator.

Commercial Broadcasters Error! Bookmark not defined.

Many radio and TV facilities are expected to be out of operation in San Mateo County for 24 hours due to in-house problems, power supply problems, and/or transmission line problems. Elsewhere in the Bay Area, 33% of the facilities are also expected to be out of service for 24 hours. After 24 hours 50% of the entire Bay Area facilities are expected to be in operation.

Water Supply And Waste Disposal

Several of the major aqueducts will sustain damage causing temporary interruptions in water supply. The major reservoirs in the area should provide ample storage to meet demands during the time required for repairs. However, damage to water transmission lines, local storage reservoirs, and pumping plants (as well as local distribution systems will affect water availability and pressure). The absence of electrical power for extended periods may preclude water deliveries where pumping is necessary. Many areas could be dependent on tanker trucks to provide their basic needs.

Sewage collection systems will sustain widespread damage particularly in the low_lying areas near the San Francisco Bay. Many sewage treatment facilities located on structurally poor ground adjacent to the Bay will be damaged and experience electrical power losses resulting in discharge of raw sewage into the Bay.

Broadmoor Water Pipelines

This system will probably be out of operation for more than 72 hours. The two principal pipe lines supplying water to San Francisco are located on overpasses over Interstate 280 in the Broadmoor area which are susceptible to damage from an earthquake.

San Andreas Water Treatment Plant

This plant may be inoperable for more than 72 hours. This plant is vulnerable because of its proximity to potential surface rupture and its dependence on commercial electric power. The plant, however, can be bypassed without significant impact to the water supply system.

Electrical Power

Damage to power plants and their ancillary facilities in affected areas can be expected to reduce generating capacity by 50%. The potential impact to San Mateo County of this reduction is lessened by the availability of power from other sources outside the affected area. Significant reduction in consumer demand is expected as well. Immediate concerns will focus on repairs to restore power to areas of greatest need. Major restoration problems include repairs to route power through the major substations; restoration of damaged and collapsed transmission line towers; reactivation of equipment at local substations; and replacement of fallen poles, burned transformers, etc.

It is reasonable to assume that during some portion of the first 72_hour period following the earthquake virtually all areas would experience some temporary loss of power. All critical facilities will require standby generating equipment and emergency fuel supplies. It is assumed that all substations in San Mateo County will be heavily damaged including the important Martin Substation. This substation is located in an area of predicted intense ground shaking and possible ground failure - major damage to some equipment at this station is a reasonable expectation. The ability to route power through this critical station constitutes a major consideration in the restoration of power to the City of San Francisco.

Natural Gas

Damage to natural gas facilities will consist primarily of some isolated breaks in the major transmission lines and innumerable breaks in mains and individual service connections within the distribution systems. Many leaks in the distribution system will affect a major portion of the urban areas on the San Francisco Peninsula resulting in a loss of service for extended periods. Random fires should be expected at the sites of a small percentage of ruptures. Transmission pipelines serving the San Francisco Peninsula are the ones most vulnerable to damage.

SFO Pipeline

Rupture of old pipeline sections will occur due to ground failure caused by liquefaction.

San Andreas Fault

Rupture of pipelines will occur due to ground failure along the San Andreas Fault zone between San Andreas Lake and Route 1. Pipeline rupture due to landslides will also occur near Upper Crystal Springs Reservoir (between San Mateo Creek and 4 kilometers southeast of the junction of Interstate 280 and Route 92).

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

Exhibits

Exhibit 1 - Modified Mercalli Intensity Scale

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EXHIBIT 1**MODIFIED MERCALLI INTENSITY SCALE**

- I** Not felt. Marginal and long-period effects of large earthquakes.
- II** Felt by persons at rest, on upper floors, or favorably placed.
- III** Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake.
- IV** Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frames creak.
- V** Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate.
- VI** Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry D cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle).
- VII** Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged.
- VIII** Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes.
- IX** General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations.) Frame structures, if not bolted, shifted off foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas, sand and mud ejected, earthquake fountains, sand craters.
- X** Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.

XI Rails bent greatly. Underground pipelines completely out of service.

XII Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Definition of Masonry A, B, C, D:

Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.

Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.

Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.

Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.

HAZARDOUS MATERIAL INCIDENT

GENERAL SITUATION

The release of a hazardous material to the environment could cause a multitude of problems that can be discussed in a general manner. The significance of the problems to the environment, property, or human health is dependent on the type, location, and quantity of the material released. Although hazardous material incidents can happen almost anywhere, certain areas of the state are at higher risk. Jurisdictions near roadways, waterways, airways, and pipelines that are used for transporting hazardous materials are at risk. Also, jurisdictions with industrial facilities that use, store, or dispose of such materials all have increased potential for major mishaps.

With the increased dependence on chemicals in our society releases of explosive and highly flammable materials have caused: fatalities and injuries; necessitated large scale evacuations; and destroyed millions of dollars worth of property. Releases of hazardous chemicals have been especially damaging when they have occurred in highly populated areas or along heavily traveled transportation routes. Toxic chemicals in gaseous form have caused injuries and fatalities among emergency response teams and passers-by. When toxic materials have entered either surface or ground water supplies, serious health effects have resulted.

CONSIDERATIONS FOR THE SAN MATEO COUNTY

San Mateo County has a population of over 675,000 in an area of 448 square miles. The bayside portions of the county from Brisbane to Menlo Park contain a number of facilities that use hazardous materials. These industries include semi-conductor and related devices; paints, varnishes, lacquers, enamels, and allied products; chemicals; and biological research activities. The coastside sections of the county are primarily rural - most of this area is forested or agricultural. There are concentrations of pesticides and related substances in the agricultural areas. San Francisco Airport is located in the northeast corner of the county. The Port of Redwood City is located in the eastern portion of the county. Major shipping lanes pass close by the San Mateo coast.

Air, Road, Rail, and Pipeline Spill Potential

There are four major highways in the county that carry large quantities of hazardous materials: State Route 1 which runs north to south along the western edge; Interstate 280 which runs north to south through the center of the county along the San Andreas Fault; US 101 which runs north to south along the eastern edge of the county; and State Route 92 which bisects the other three roads as it runs east to west at mid-county.

US 101 is the most heavily traveled in terms of truck traffic and is the most frequent location of those hazardous materials spills which occur on major roads. The Southern Pacific/Santa Fe railroad right of way parallels 101 through the heavily populated eastern side of the county. Natural gas pipelines also run south to north along this eastern Bayshore. Truck, rail, and pipeline transfer facilities are concentrated in this region, and are involved in considerable handling of hazardous materials.

Hazardous Waste Generation

San Mateo County ranks sixth out of the nine bay area counties in hazardous waste tonnage generated for off-site disposal and third in the amount for on-site disposal. Approximately 7% (16,500 tons) of the hazardous waste generated in the county is transported off-site to approved treatment and disposal sites throughout the state. The balance is disposed of on-site through methods including evaporation ponds, incineration, pre-treatment of sewage discharge, and recycling.

Pre-treatment and sewage disposal is the predominant form of authorized hazardous waste disposal within the county. Approximately 184,000 - 188,000 tons (83-84%) of county-generated hazardous waste is diluted to sewer agency standards: 3,100- 3,750 tons (1-2%) evaporated; and 15,000-18,000 tons (7-8%) recycled. There are presently two commercial firms which recycle locally: Romic Chemical Company in East Palo Alto which recovers industrial solvents; and Ekotek Lube in San Carlos which re-refines oil.

Spill history in the county shows most problems occurring in the Brisbane/South San Francisco/San Francisco Airport area in the northeast and in the Belmont to Menlo Park area in the southeast. These bayside areas have substantial suburban development with a significant population at risk should a serious spill occur. These sections also overlies a large groundwater basin.

Illegal Disposal

Illegal disposal of hazardous waste into sewer systems, at landfill sites, and directly into streams, or dumping along roadways is a growing problem. Illegal dumping account for a substantial fraction of emergency responses by the county Hazardous Materials Response Team. Unfortunately, this type of incident is expected to increase as operating costs (and use fees) for authorized disposal sites rise.

Industry generally is aware of hazardous materials regulations and appropriate disposal procedures and acts responsibly. Small generators (small business and households), are largely unaware of the hazardous waste problem and tend to view current regulations as not pertaining to them. Small generators are also less able to incur the costs of proper disposal and may attempt to cut operating costs by illegal dumping. There is a lack of incentives (both positive and negative) to encourage proper disposal, recycling, or reduction in waste generation.

Contaminated Waste Sites

State and regional agencies have identified eight contaminated waste sites in San Mateo County which potentially pose a threat to public health. The majority involve disposal prior to the enactment of regulatory controls. Four of the sites have been designated as eligible for state clean-up funds:

Zoecon Corporation/Chipman Chemical East Palo Alto	A former sludge pond with arsenic, heavy metals, and pesticides (58th worst site statewide)
Sun Chemical Corp/Rental City Trucks South San Francisco	Soil contaminated with lead, zinc, and cyanide from former printing operations (70th worst)
Heally Tibbitts/Wildberg Brothers Smelting and Refining Company South San Francisco	Heavy metals (84th worst)

Pacific Gas and Electric Martin Service Center Daly City	Soil contaminated with naphthalene, anthracene, naphthalene, anthracene, benzene (87th worst)
Homart Development Company South San Francisco	Heavy metals, acid waste sumps, solvents, storage tanks from former steel operation
Cal Mac Transportation Company East Palo Alto	Surface solvent and resin contamination removed; subsurface investigation continuing
Bayshore Executive Park San Mateo	Abandoned site contaminated by lead and heavy metals
Marsh Road Landfill Menlo Park	Site has been used to dispose of waste - no cleanup is planned

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

Reference

AREA OES SOP 1.2

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FLOODING

General Situation

Floods are generally classed as either slow-rise or flash floods. Slow-rise floods may be preceded by a warning time lasting from hours, to days, or possibly weeks. Evacuation and sandbagging for a slow-rise flood may lessen flood-related damage. Conversely, flash floods are the most difficult to prepare for, due to the extremely short warning time, if any is given at all. Flash flood warnings usually require immediate evacuation within the hour.

Once flooding begins, personnel will be needed to assist in rescuing persons trapped by flood water, securing utilities, and cordoning off flooded areas and controlling traffic. These actions may overtax local agencies and additional personnel and resources may be required. It is anticipated that existing mutual aid resources would be used as necessary to augment local resources.

Special Situation

Watersheds in San Mateo County are relatively small and the run to the Pacific Ocean or to the San Francisco Bay. The typical long, slow-rising floods experienced in the Central Valley and along the great rivers of northern California do not occur here.

Major floods in the county have occurred in 1940, 1955, 1958, 1973, 1982, 1983, and 1986. The December 1955 flood was the most severe in recent history until the 1982 event. Major flooding also occurred in Dec 96 - Jan 97. The 1982 flood had its most severe impacts in Pacifica, where heavy rains induced mud flows which destroyed several homes and killed 3 children. The flood also impacted the community of Pescadero - the one part of the rural area where a significant amount of development has occurred in a natural flood plain. The storm almost completely flooded the rural service center, blocked all access roads to the town, and severed telephone and electric power services. Most of the residents of Pescadero had to evacuate.

Rural Flooding

The risk of flooding in the rural area is dependent on several variables: the amount and intensity of rainfall that is annually received in each watershed; the width and topographic setting of the flood plains of the major streams; the degree to which flood control improvements have been made; and, most importantly, the amount of development that is located within known flood plains.

The unincorporated rural areas of San Mateo County contain 21 major watersheds. All but two of these watersheds drain to the Pacific Ocean. Only the Crystal Springs and San Francisquito Watersheds drain to the San Francisco Bay.

In the rural area, the major streams remain almost completely in undisturbed natural conditions. Very few flood control improvements (outside of installation of culverts and occasional clearance of debris from creek channels) have taken place. Major flood control projects (such as channelization or channel diversion) have been undertaken in more densely populated urban areas on the bayside.

Compared to neighboring bay area counties, the rural portion of San Mateo County receives abundant annual rainfall. In effect, the rural mountainous areas act as a "rain trap." Average rainfall in the rural area ranges from more than 45 inches per year in the Skyline Ridge area to over 30 inches per year in most of the South Coast watersheds west of Skyline. By comparison, Redwood City, located on the east side of the Skyline Ridge, averages only 19 inches per year.

During years of average rainfall and relatively mild storm systems, the natural stream channels of the rural watersheds are adequate to drain runoff. However, in years of abnormally high rainfall or unusually severe storms, disastrous flooding can occur. Runoff during such conditions cascades rapidly down the narrow stream channels of the mountainous areas. The strong velocity of flood waters during these times can carry debris for long distances, block stream channels and create areas of severe localized flooding.

The table in Exhibit 1 summarizes the annual measured stream flow of San Gregorio and Pescadero Creeks between 1970-1981. This table indicates the wide variation in runoff that can occur in the rural area. In the San Gregorio watershed, an area that drains over 39,000 acres, runoff has ranged from over 61,000 acre-feet in 1972-3 to only 840 acre-feet in the severe drought year of 1976-77.

Urban Flooding

In more densely populated urban areas, the risks to life and property from flood hazards are increased. In the past, development patterns in urban areas have generally ignored the threat of flooding. As more and more development occurs within flood plain areas, it often became necessary to finance expensive engineering solutions to the flooding problems.

In the urban portion of the county, the problem of directing storm runoff from the mountains to the Bay has been addressed through various flood control and drainage districts (Exhibit 2). Improvements have included installation of culverts and bridges, construction of levees, various methods of channel alteration or installation of underground storm drains. In spite of these improvements, many of the creek channels could be overtopped during the 100-year flood.

The "solution" to the flood hazard problem in the urban area can itself create certain hazardous situations. When natural stream channels are altered and vegetation is removed, the velocity of the storm runoff increases because it can more efficiently flow toward the bay. This can create hazards to those who might accidentally fall into the creek, particularly young children.

Urban areas can also be victimized by the problem of debris blockage of creek channels. In many areas, residential neighborhoods border directly on creek channels. These areas could easily be spot flooded if the channels are not clear. Additionally, decaying flood-deposited garbage or other organic material could create health hazards in the aftermath of a flood.

Tidal Flooding

The hazards of tidal flooding in areas proximate to San Francisco Bay have been mitigated to some degree by the series of levees constructed for salt evaporation ponds in the southeast of the county and for flood protection in the north and central parts of the county. Generally, however, these levees would not withstand the flood intensities of the 100-year base flood.

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

References

AREA OES SOP 1.3

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MAJOR AIR CASH

General Situation

San Francisco International Airport is the fifth busiest international airport in the United States. Up to 30,000 transients are served on a daily basis with 30% of them unable to speak English. In the 63 year history of the airport, there have been no passenger deaths.

A plane or jet crash in San Mateo County could cause serious damage and life loss requiring an immediate and coordinated response by various law enforcement, fire, and medical services. In the case of a downed aircraft, the size, speed, and highly flammable fuel magnify the proportions of emergency response services required. The worst air crash in San Mateo County occurred in 1953 when an Australian airliner plunged into Kings Mountain near Woodside. Nineteen passengers and crew members were killed.

The numbers of killed and injured persons from an aircraft accident is dependent on the location of the crash and the way the plane impacts the ground. If the crash occurs in a populated area, the time of day is important in determining numbers of persons injured or killed on the ground.

Law enforcement efforts in a major crash would focus on cordoning off the impacted location, maintaining open traffic lanes for emergency vehicles, and keeping curious citizens at a safe distance from the incident. Fire fighting resources would be charged with fire containment and search and rescue. Depending on local arrangements, the local response agencies will effect a unified command organization. Mobile command and communication centers would be established as needed.

Special Situation

San Francisco International Airport

San Francisco International Airport(SFIA) is owned by the City and County of San Francisco and operated in San Mateo County. The airport is located in the northeastern quadrant of San Mateo County. Aircraft landing at SFIA usually make their approaches to Runway 28 by flying northwesterly up the bay from San Jose. Exceptions to this practice occur when there are strong southerly winds. Aircraft approach over the City of Millbrae on Runway 10. Aircraft taking off from SFIA fly over San Bruno, South San Francisco, Brisbane, and Daly City in what has been referred to as the gap. (Exhibit 1) The gap as it traverses these cities is 1.2 miles wide and 5.8 miles in length. This aircraft flight path encompasses the entire Serramonte neighborhood of southern Daly City, central San Bruno, and South San Francisco with resident population of approximately 45,000 persons. These neighborhoods are characterized by single family residential uses at about sixteen units per acre. Multi-family units are scattered throughout the planning area and are constructed at 20-25 units/acre. Several large regional shopping centers are also located within the gap.

Due to the close proximity of dwelling units and high density of the urbanized area, a downed jet liner could cause a large number of fatalities and serious injuries. Since the homes are typically located within six feet of each other, the number of units immediately impacted would be high and the risk of fire spreading would be significant.

Two factors related to the airport departures should be noted. The majority of flights leaving San Francisco International Airport use the Shoreline Departure route. The shoreline is used when fog does not reduce visibility of San Bruno Mountain. When the fog is heavy, or the departing flight is destined for the Far East or Hawaii, the jet will use the Gap Departure.

The Gap Departure is used by flights from San Francisco International Airport approximately 30% of the time (65,000-70,000 flights/year).

The second important factor for departures is the size and load of flights headed for Pacific destinations. The jets are heavy with fuel and typically carry 250 persons. These characteristics, would require extra medical facilities and fire fighting capabilities.

While the above scenario would dictate a quick and multi-jurisdictional response, the probability of such an event is low. According to national studies of airport accidents involving large aircraft, the vast majority of airliner accidents occurs either immediately before landing or within 1,000 yards of take-off.

San Carlos Airport

On the baylands of south central San Mateo County, San Carlos Airport is a busy facility catering primarily to private pilots and student pilots. Takeoff and landing patterns for this airport are restricted to baylands located generally southeast and northeast from populated areas. Exceptions to this are portions of the Redwood Shores section of Redwood City and Foster City.

Half Moon Bay Airport

Half Moon Bay Airport is located directly north of Pillar Point Yacht Harbor and directly east of the Pacific Ocean in the central coastal region of San Mateo County. Although its facilities are used mainly by pilots of private, single engine aircraft, it possesses sufficient runway length to accommodate a small multi-engine jet airliner. Takeoff and landing patterns encompass primarily rural and scattered unincorporated residential areas (2-3 residents per acre) to the north and east of the airport and the incorporated city of Half Moon Bay (4-6 residences per acre) to the south.

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

References

San Mateo County High-Rise/Major Air Crash Response Assignment Plan adopted by the San Mateo County Fire Chiefs' Association

- Airport Traffic Control Plan
- Mutual Aid Agreement between San Mateo County Fire Departments and San Francisco Fire Department
- AREA OES SOP 1.7

TRAIN CRASH

General Situation

Rail service into and out of San Mateo County continues to change. The most notable was the purchase of Southern Pacific Right-of-way by San Mateo, Santa Clara, and San Francisco counties. Train crashes can cause deaths, injuries, and substantial property loss. If the crash causes fires, hazardous materials releases, or other secondary effects, the consequences can be even more serious and environmentally damaging. Most crashes are caused by operator error or signal control system failures.

Special Situation

Two tracked systems exist in San Mateo County - the Southern Pacific, and the Bay Area Rapid Transit District (BART). The Southern Pacific right-of-way runs from Palo Alto in the south through Brisbane in the north with spurs in industrial areas. A freight track leaves the mainline in south Redwood City and traverses Fair Oaks, the 101 freeway (by an overpass), and East Menlo Park. There are spurs in Redwood City (down Chestnut Street, under 101, and out to the Port of Redwood City), San Carlos (north of Commercial Street), Burlingame (south of Adrian Road), and South San Francisco (several industrial spurs, including tracks to several points in Oyster Point). An abandoned right-of-way leads off the mainline in South San Francisco northwest through Colma and Daly City (old Mission Boulevard route).

The Southern Pacific mainline passes through eleven densely populated cities and some of the most heavily concentrated industry in the county. With one exception (Hillsdale Avenue in San Mateo) all crossings of major east-west streets are at grade and controlled by gates and signals. There is also a railroad control tower in Redwood City.

The SP line is used to carry passengers (CalTrain operated by AmTrack and the San Mateo and Santa Clara County Transit Districts) and freight. The peak commuter hours are Monday through Friday from 7:00 AM to 9:00 AM and 3:30 to 6:30 PM. About 15,000 passengers use the train each day. On nights and weekends limited passenger service is provided and cargo is transported. Some freight trains also use the tracks during the day.

The Bay Area Rapid Transit District (BART) extends on above-ground tracks next to Interstate 280 into the northern part of San Mateo County with a large elevated station at Daly City. Tracks are being extended to Colma (to provide better train turn-around) and a continuation to the airport has been proposed. BART carries passengers only. Its major lines are Daly City in the west to Concord in the East and Richmond in the north to Fremont in the south. The peak service is during the commute hours. Both CalTrain and BART run through densely populated areas and near major transportation routes. CalTrain runs parallel to and usually very near El Camino Real and BART parallels Interstate 280 in Daly City.

Accidents would cause great immediate problems in directing multi-agency response and controlling traffic, and very negatively affect the use of two major roads. Any hazardous materials carried as freight or in another impacted vehicle could substantially complicate response actions. Train accidents are normally associated with:

- Train accidents could be caused by derailment
- An accident with a vehicle at a crossing
- An accident with a pedestrian at a crossing
- A collision with another train
- Or an explosion or fire in or near the train.

In the case of BART, a train could fail to stop at the BART station in Daly City (as occurred in Fremont early in the life of BART). The impact of this type of incident would be extremely severe since the station in Daly City is located at the city's busiest intersection (Junipero Serra and Knowles Avenue at Interstate 280).

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One Chapter Two, Operations event specific Checklists.

Reference

- AREA OES SOP 1.8

LANDSLIDES

General Situation

Landslides include all movements of soil, rock, or debris as a result of falling, sliding, or flowing. Most landslides are a combination of two or more types of motion and/or material. Landslides are categorized according to the types of motion and material involved. They can be directly caused by earthquakes or be completely independent of them.

Falls describe the sudden movement of material from vertical or near-vertical slopes and are generally labeled by the type of material displaced (e.g. soilfall, rockfall).

Slides refer to movements in which the material moves more or less as a unit along recognizable shear surfaces. If the shear surface is concave, the slide movement will be rotational and is denoted by the term "slump." If the shear surface is planar, translational movement occurs and the term "slide" is used alone. Both slides and slumps are further classified according to the type of material involved (e.g., earth slump, rockslide, debris slide where "debris" refers to combinations of soil, weathered bedrock and/or organic material).

Flows describe the movement of material in which a myriad of small-scale movements rather than massive sliding is the dominant mechanism of transport. This category is further broken down by the type of material involved and the rate at which it moves (e.g., debris flow, mudflow). The modifier "avalanche" is used to describe exceptionally fast flows.

The occurrence of landslides is determined by both natural and human factors. Natural factors include the cohesive strength and shrink-swell characteristics of the affected minerals, the orientation of joints and planes of weakness between slide material and bedrock, the steepness of slopes, the degree of saturation of ground materials (highly affected by rainfall), and the density of vegetation. Human factors include the sharp angling and overloading of slopes, the removal of natural vegetation, and the addition of water to the soil by watering of lawns, septic system drain fields, and on-site ponding of storm runoff.

Special Situation

The winters of 1982, 1983, 1986, and 1996/7 provided a grim reminder of the degree of hazard from landslides in San Mateo County. An extraordinarily intense storm on January 4, 1982 saturated many areas, triggering hundreds of small to major landslides in the county. Three children were killed in Pacifica when a debris avalanche struck a home, and millions of dollars in property damage were attributed to landslides throughout the county.

Losses from landslides are directly proportional to population density. For San Mateo County, the hillside areas (both incorporated and unincorporated) from Redwood City to Daly City and Brisbane have the greatest potential for economic loss due to landslides. However, as the population of the county increases and more development takes place in rural unincorporated areas, the potential for economic loss due to landslides could increase in these areas as well.

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

Reference

AREA OES SOP 1.9

WILDLAND FIRE

General Situation

Because of the urban, rural and wildland intermix areas in California, fire protection is a difficult problem and fire protection systems are complex. Large tracts of sparsely populated land must be protected from wildland fires in hot, dry summers at the same time that adequate protection must be provided to densely populated urban centers. Fire protection in urban areas must also be designed and equipped to cope with industrial fires with their associated hazardous materials concerns, high-rise structures of varying occupancies, densely built and highly populated residential apartments and similar structures, and transportation accidents involving hazardous materials.

There are twenty cities within San Mateo County. Each city is responsible for its fire protection either by utilizing its own resources or contracting with the California Department of Forestry, a fire district, or adjacent municipal service. Brisbane, Burlingame, Daly City, Foster City, Hillsborough, Millbrae, Pacifica, Redwood City, San Bruno, San Mateo, and South San Francisco have their own fire departments. Other cities are protected by the Colma, Half Moon Bay, Menlo Park, and Woodside Fire Protection Districts. The South County Fire Authority is responsible for fire protection in Belmont and San Carlos. The unincorporated area is the primary responsibility of the California Department of Forestry, along with some fire protection districts and volunteer fire companies.

Fires, in both urbanized and forested settings, can rapidly extend to the point that local resources are inadequate. All fire agencies in San Mateo County have signed the California Master Mutual Aid Agreement and participate in mutual aid operations as required.

Special Situation

Wildland Fires

San Mateo County, like many other parts of California, has environmental characteristics which increase the potential for fires in wildland areas. Highly flammable vegetation, long and dry summers, rugged topography, poor access for fire vehicles, increasing recreational use of remote lands and popularity of rural residential development are all factors which are present in many of the unincorporated portions of the County which contribute to this hazard potential.

The degree of fire hazard is dependent on three major components: the natural setting of the wildland area; the degree of human use and occupancy of the wildland area; and the level and ability of public services to respond to fires that do occur.

Natural Setting

Vegetation Type

Almost the entire unincorporated rural area is covered with woodland, brush or grassland except for the cultivated lands in the Coastal Zone. In recent years, extensive study has been undertaken at the state level to classify the fire hazard severity of different regions of the state. One of the key components in measuring severity is the type and quantity of flammable vegetation within a given unit of land area. This factor, also known as "fuel loading characteristics," can then be combined with weather and slope to obtain a measure of relative hazard.

Three basic fuel loading characteristics have been identified by the state.^a "Heavy" fuel loading vegetation is assigned to woodland and brushwood areas. This characteristic is generally assigned to vegetation that is six feet or more in height and which has a crown density^b of 20 percent or more of the ground area. The heavy fuel loading vegetation types include conifers, and mixed evergreen timberlands and chaparral, which are found in abundance in the rural area of the county.

"Medium" fuel loading vegetation generally includes scrub vegetation that is less than six feet in height but with similar crown density characteristics. This category includes California sagebrush, coyote brush, manzanita and other chaparral species common to the county.

"Light" fuel loading vegetative types are various types of grasslands, herbaceous rangelands and irrigated pasture lands. These areas are almost completely treeless and, although highly flammable during dry seasons, do not have significant fuel content to sustain any fire that might be started.

Weather Factors

The second major natural characteristic to consider in fire hazard measurement are local weather conditions. In Northern California, very little rain normally falls between mid-April and the beginning of November. By September, many portions of the state are tinder dry. At the same time, it is not unusual for strong, drying winds to blow in from the north and east.

^a California Department of Conservation, Division of Forestry, [A Fire Hazard Severity Classification System for California's Wildlands](#), pages 10-13.

^b Crown density refers to the density of the top of the vegetation (at its crown) in comparison to the density of the ground area. Obviously, the higher the crown density the more potential fuel there is for burning.

The state has established three "critical fire weather frequency" classes to measure the weather-related fire hazard severity. These classes basically measure the annual number of days in which a critical "fire load index" is exceeded over a 10-year period, with Class I the lowest and Class III the highest level of danger.^c

A fire weather frequency class rating has been provided for all of the USGS quadrangles in California. Due to the high rainfall experienced by the portion of San Mateo County west of Skyline Boulevard, as well as the cooling influence of the summer coastal fog, no portion of San Mateo County is given the most severe weather rating.^d

Slope Characteristics

The third major characteristic of fire hazard measurement is the degree of slope present in a localized area. The rugged terrain and steep slopes that characterize much of the county's rural area can create extreme access problems for fighting fires once they have started. Generally, vegetation is more abundant in steep canyon areas due to less severe sun and wind exposure and greater capture of rain runoff. Fires that start in the bottom of canyons will burn 16 times faster up slope than if they begin at the top of ridges and burn down slope.

The state has divided slope categories into three different classes of fire severity.^e Class I includes slopes from 0 to 40%. This category assumes that direct attack on the fire is possible with all-wheel drive fire trucks, bulldozers, hand crews, and aircraft. Class II includes slopes between 41 and 60%. This class assumes direct attack is not possible with fire trucks, but still possible in most cases with bulldozers, hand crews, and aircraft. Class III (slopes greater than 61%) includes areas mostly beyond the capability of bulldozers which can only be directly attacked by hand crews and aircraft.

Composite Fire Hazard Severity Scale

Based on the information obtained over years of research into the effects of vegetative fuel loading, weather and slope factors in determining fire risk, the state has developed a fire hazard severity matrix for general planning purposes.^f This matrix is reproduced as Exhibit 1. 1- Composite Fire Hazard Severity Ratings for Vegetative Fuel Loading, Slope and Weather Conditions

^c A Fire Hazard Severity Classification System for California's Wildlands, pages 14-17.

^d Ibid., pages 35-48.

^e Ibid., page 19.

^f California Department of Forestry, Fire Safety Guides for Residential Development in California, 1980, page 6.

Human Use of the Wildland Area

The degree of fire hazard in the wildland areas is also greatly dependent on the number of persons who have access to those areas, whether as permanent residents or daytime visitors. Although a significant amount of new residential development has not occurred in these areas, the access to the development that has occurred does not always meet the standards necessary for optimum fire vehicle access. This is true for certain private roads that have been constructed to serve new development and for certain public roads that were accepted into the county road system in like and kind.^g

Many of the large private properties in hazardous fire areas that have been purchased for open space use have recently been opened for the first time to public access, thereby increasing the risk of wildfire.

Level of Fire Protection Services

County Fire Department of Forestry Responsibility Areas

Since 1962, the county has contracted with the California Department of Forestry for structural fire protection and general rescue services in the unincorporated areas of the county not served by other fire districts or departments. Officially, this service is provided by CDF under the title of the County Fire Department. In some counties, CDF only has wildland fire protection (for forest, brush and grassland fires) in what are known as "State Responsibility Areas."^h The general goal of the County Fire/CDF system is to provide a response time of five minutes or less to any fire occurring in the rural area 90% of the time.ⁱ

^g Many of the roads, both public and private, into interior portions of the rural area do not meet county standards. This is primarily because they were constructed prior to the adoption of modern road standards or were originally built as logging roads intended to serve very small traffic loads. The public roads that do not meet standards were accepted "in like and kind" by the county during the 1950s upon offer of dedication. The nature of these roads complicates the provision of fire protection services.

^h State Responsibility Areas are the areas where CDF has primary responsibility for preventing and suppressing wildland fires. These are primarily forested lands, watershed lands and lands used for forage.

ⁱ The County Fire/CDF response time goal is expressed in the County of San Mateo, Final Budget, Fiscal Year 1981-1982, page 41.

There are four main County Fire/CDF substations located within the boundaries of San Mateo County. The rural area is served by stations at Skylonda (near the intersection of Skyline Boulevard and state Route 84) and Pescadero. Additional support is available for the rural area at CDF's Saratoga Summit Station on Skyline Boulevard in Santa Clara County. The unincorporated urban area on the Bayside is served by fire stations in Emerald Lake Hills and on Tower Road in Belmont.

County fire protection services for the rural area are supplemented by eight volunteer fire companies. These small companies made up of local residents often are the first to respond to local emergencies. In recognition of their value, the Board of Supervisors annually budgets funds for the volunteers' equipment, protective clothing and training as part of the county's contract with CDF. Exhibit 2 lists the County Fire and volunteer fire protection facilities, their level of staffing, and the equipment available for fire protection services.

Another measure of the level of adequacy of fire protection for a particular area is the insurance rating set by the Insurance Services Office, a grading schedule to measure the relative fire risk of different communities. The ISO rating reflects the adequacy of water supply, adequacy of the fire department, the quality of fire communications and the frequency of fire safety control programs. The grading system ranks areas from one (best) to ten (most deficient).^j

In San Mateo County, the grading classifications range from Class 3 to Class 9, with several of the city fire departments in the Class 3 rating. The unincorporated areas served by CDF range from a rating of 4 in county Service Area #1 (San Mateo Highlands) to 8 in the Pescadero, Burlingame Hills, Palomar Park, and Skyline County Water District areas. The remaining unincorporated areas which encompass most of the rural county have been rated Class 9.

Other Fire Protection District Responsibility Areas

Fire protection districts provide fire protection services to portions of the unincorporated areas which are not served by County Fire/CDF. In addition to providing fire protection services, districts also provide the following services: ambulance, rescue and first aid; clearing of vegetation; adoption of fire prevention ordinances; issuance of burning permits; and dissemination of fire prevention information. Seven fire protection districts directly serve portions of the unincorporated areas of San Mateo County that are not served by County Fire/CDF. These districts have varying mutual aid agreements with other jurisdictions, allowing them to request back up aid if necessary. Exhibit 3 lists the individual fire protection districts, the number of their facilities, the portions of the unincorporated area served by each, and the number of personnel and equipment they have available. This Exhibit also summarizes the mutual aid agreements each district has with other districts.

^j International City Managers' Association, Municipal Fire Administration, pages 15-23.

Urban Fires

County Fire/CDF generally provides fire protection services to the unincorporated rural areas, with the exception of a few urbanized unincorporated portions of the county, most significantly, Emerald Lake Hills, Palomar Park and San Mateo Highlands. Other unincorporated urban areas are served by fire protection districts, as indicated in Exhibit 3. In these areas, structural fire hazards can be a major problem.

The key components in measuring relative fire hazard in urban areas are access for fire vehicles and availability and adequacy of water for fire flow. Weather is usually not an important factor in the urban portion of the county. Response time is generally faster in urban areas. Two of county Fire's four stations, Belmont and Emerald Lake, are located in the unincorporated urban area. The independent fire protection districts have facilities in close proximity to developed urban areas.

In the Belmont area, water supply is generally adequate to meet the needs for fighting structural fires. In Emerald Lake Hills and Devonshire Canyon the key problems have been inadequate roads and water distribution systems (hydrants and size of water lines).^k

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

Exhibits

Exhibit 1 - Composite Fire Hazard Severity Ratings for Vegetative Fuel Loading, Slope and Weather Conditions

Reference

AREA OES SOP 1.6

^k San Mateo County Planning Division, Emerald Lake Hills Community Plan, 1977, page 11.

EXHIBIT 1

**COMPOSITE FIRE HAZARD SEVERITY RATINGS FOR
VEGETATIVE FUEL LOADING, SLOPE AND WEATHER CONDITIONS
CRITICAL FIRE WEATHER FREQUENCY¹**

	<u>Frequency I</u>			<u>Frequency II</u>			<u>Frequency III</u>		
	Slope %			Slope %			Slope %		
	0-40	41-60	61+	0-40	41-60	61+	0-40	41-60	61+
Fuel Loading^m	(1)	(1.6)	(2)	(1)	(1.6)	(2)	(1)	(1.6)	(2)
Light (grass) (1)	1	1.6	2	2	3.2	4	8	12.8	16
Medium (scrub) (8)	8	12.8	16	16	25.6	32	64	102.4	128
Heavy (wood) (16)	16	25.6	32	32	51.2	64	124	204.8	256

Source: California Department of Forestry, “Fire Safety Guides for Residential Development in California - 1980.

1. Fire Hazard Severity Ratings can be interpreted as follows:
 Moderate Hazard = 1.0 - 12.8
 High Hazard = 16.0 - 32.0
 Extreme Hazard = 51.2 - 256.0
2. Critical Fire Weather Frequency is a term used by the California Department of Forestry to rate weather conditions that are likely to produce high intensity fires. The frequency ratings , I, II, and III are based on the number of days per year that a critical fire load index is exceeded in a given fire danger area. Frequency I (moderate) is assigned to area exceeding this index less than one day per year over a 10-year period. Frequency II (high) is assigned for area exceeding the index from 1 - 9.5 days per year and Frequency III (extreme) for those areas exceeding 9.5 days.
3. The figure in parentheses represent numerical values assigned to slope/fuel loading classes in order to arrive at the fire hazard severity ratings.

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OIL SPILL

General Situation

San Mateo County is nationally recognized for its unique environmental qualities and resources. The coastline has a great diversity of coastal wildlife including numerous endangered species. Fishing areas along the central California coast line support over 2,500 commercial fishermen operating 1,800 vessels. In 1979 these fisherman landed approximately 79 million pound of fish at an estimated value of \$40 million on the dock and \$150 million at retail prices. The sports fishing industry for the central coast generated over \$118 million in direct expenditures in 1990. The tourist and recreation areas attract millions of visitors to the Bay Area annually and provide a major economic resource to the region.

The oil spill caused by the Exxon Valdez in Prince Williams Sound provided a wake-up-call for Emergency Planners at the federal, state and local levels. As a result of the disastrous spill and the inability of responders to provide a timely and coordinated cleanup effort, the federal government passed legislation to provide oil spill response guidelines. Federal law (CFR parts 300 and OPA 90) provides requirements for Oil Companies and Shippers and assigns roles and responsibilities in oil spill response at the federal and state levels. The U.S. Coast Guard has been designated as "On-Scene Coordinator" (OSC) to represent federal interests.

Special Situation

Marine oil spills pose a significant potential danger to the San Mateo County coastal environment both within San Francisco Bay and along the Pacific coastline. A continual threat exists from the substantial number of vessels that travel along the central coast, including approximately 1,800 oil tankers which annually enter the Golden Gate on their way to Bay Area refineries. Other marine vessels carry hazardous materials and chemicals which, if spilled, also pose a threat to the environmental and economic resources of the county.

In response to the possibility of a major oil spill California Senate Bill (SB) 2040, the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 (Act), was signed into law by the Governor in September 1990. This legislation created the Office of Oil Spill Prevention and Response (OSPR) within the Department of Fish & Game in January 1991 and provided guidance for local governments to prepare Oil Spill Contingency Plans. Pursuant to sections 8670.35 and 8670.38-40 of the Government Code; and Section 22 of SB 2040, local governments were encouraged to prepare, update, or revise an Oil Spill Contingency Plan Element (plan element) as part of their existing Hazardous Materials Emergency Response Area Plan (Area Plan), as required by Section 25503 of the Health and Safety Code. The San Mateo Operational Area Oil Spill Contingency Plan Element is in work and will be published during August 93.

The purpose of the San Mateo Operational Area Oil Spill Contingency Plan Element is to protect San Mateo County and its shoreline from oil spills by facilitating and guiding the county's response to oil spills in the marine environment. This response will operate in a coordinated effort with federal and state agencies utilizing the "Unified Command System" management structure to respond to an oil spill.

The primary objective of the Oil Contingency Plan is to provide a comprehensive, functional document that covers all aspects of oil spill planning and preparedness so as to provide the best achievable protection of San Mateo County and the California Coast. Once a spill occurs the county's objective switch to those of controlling the source of the discharge, containing the spill, cleanup, disposal of the oil and contaminated materials and finally documentation and cost recovery.

The county's priorities for protection are as follows:

- Human health and welfare
- Endangered fish, wildlife, and their habitats
- Threatened fish, wildlife, and their habitats
- Sensitive environmental areas, such as, spawning habitat
- Other fish, wildlife, and their habitat, including migratory corridors
- Public recreational areas and areas of commercial interest
- Private recreation areas, individual boats, etc.

The San Mateo Oil Contingency Plan Element addresses the following issues:

- Identification of problems unique to the San Mateo County Coastal Region which includes both the San Francisco Bay and Pacific Ocean areas
- Identification of preparedness requirements to protect the health and safety of residents of San Mateo County and its coastal environments
- Provides a structure and set of procedures which coordinates the efforts of local governments, private industry, civic groups and state and federal agencies
- Condense, organize and simplify information so that the responder has access to all elements and does not have to refer to other documents
- Provides fundamental check lists for key positions which will highlight important steps or contacts

Reference

San Mateo Operational Area Oil Spill Contingency Plan Element

CIVIL UNREST

General Situation

The spontaneous disruption of normal, orderly conduct and activities in urban areas, or outbreak of rioting or violence that is of a large nature, is referred to as civil unrest. Civil unrest can be spurred by specific events such as large sporting events or criminal trials, or can be the result of long-term frustration with authority. Civil unrest is usually associated with the fact that normal on-duty law enforcement and safety forces cannot adequately deal with the situation until additional resources are acquired. This is the time period when civil unrest can grow to large proportions.

Threat to law enforcement and safety personnel can be severe and bold in nature. Securing of essential facilities and services is necessary. Looting and fires can take place as a result of perceived or actual non-intervention by authorities.

Specific Situation

Fortunately, San Mateo has not encountered the problems Los Angeles faced in the Watts Riots of 1964. The 1992 Rodney King verdict caused the most widespread rioting in recent history with losses of property in the millions.

More recently, radical militia groups have utilized terrorism as a weapon with bombings of civilian targets and governmental facilities including: the World Trade Center in New York City; the Olympic bombing in Atlanta; and most recently, the Federal Building in Oklahoma City. The San Mateo Area, consisting of residential, industrial and commercial properties, is minimally vulnerable to the effects of civil unrest.

Emergency Response Actions

Emergency response actions applicable to all common hazards are presented in the Volume One, Operations Section Event Specific Checklists.

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NATIONAL SECURITY EMERGENCY

General Situation

With the end of the Cold War and the recent demise of the Soviet Union, the chance of war between the super powers has been greatly reduced. Strategic Arms Reductions Treaties (Start I & II) have been signed by the Soviet government and the United States to greatly decrease the number of nuclear arms between the two superpowers.

Although the threat of conflict has diminished between the super powers, the number of regional, conventional (non-nuclear) wars has greatly increased to include major conflicts in the Middle East and Eastern Europe. The United States has recently participated in major conflicts in Central America and the Middle East. The proliferation of weapons technologies in the last decade has given many countries the capability to attack other nations with weapons of mass destruction. Fortunately, mass destruction weapons have not been used in these conflicts to date.

Terrorism appears to be on the rise with bombings of government facilities and civilian targets on a world-wide basis. A new threat has surfaced with the breakup of the Soviet Union - physical control of nuclear weapons, weapons grade nuclear material, and biological and chemical weapons. The possibility of terrorists obtaining weapons of mass destruction now presents a major threat.

If a nuclear detonation occurred anywhere in the world the consequences to the United States would depend upon the location and nature of the attack. There are a number of conditions may prevail and require different responses.

International Crisis

When nations of differing political goals fail to settle disputes through diplomatic negotiations, war may result. It is possible an attack would be preceded by several days or possibly weeks of tense international crisis rather than by surprise. When diplomatic relations fail and one or more nuclear weapons are detonated, protective actions will be less effective than those taken before the attack. Preparation and evacuation prior to an attack can reduce casualties. Post-attack evacuation or relocation will be extremely difficult or impossible.

Trans-Oceanic Fallout

Prevailing westerly winds could, in the event of a nuclear exchange in Asia or nuclear detonations in the Pacific area, result in fallout or rain-out in California. Radiation intensities could vary greatly but would probably be limited, creating an environmental health problem.

Accidental Launch

A majority of the strategic nuclear weapons within the former Soviet Union remain aimed at targets in the United States. The possibility remains for an accidental launch of a nuclear warhead toward the western United States. Should this occur, the affected area would be limited and the remaining resources of the state could be applied.

Limited Attack

The existing potential of war between the United States and a major nuclear power has been greatly reduced with the end of the Cold War. However, the possibility of a resurgence of ideological conflict cannot be discounted. It is prudent to maintain plans for a possible nuclear attack against the United States. Limited attack is commonly associated with these options:

Counter Force Areas

An attack directed at military installations capable of retaliatory strikes (counter-force) would cause massive problems for adjacent areas. Since it is possible a period of intense crisis could precede such an attack, it may be feasible to initiate a shelter preparation program in areas away from Counter-Force targets. This would include the use of other radiological countermeasures in both risk and non-risk areas.

Other Military Targets

An attack which begins as a counter-force action may be expanded to include additional military targets (e.g., communications and control facilities, supply depots, and industries directly supporting the military mission).

Counter-Value Areas

An attack against economic targets and population centers (counter-value) could occur, but it would most likely happen after an enemy had neutralized targets that could do damage to his own military forces.

All-Out Attack

A full-scale attack against military and economic targets without a preceding period of increasing international tension is possible but not likely. There are few if any effective countermeasures against such attack without a massive national program of blast shelter construction.

Nuclear Weapons - General

The effects of the detonation of a thermonuclear weapon vary with the type of burst employed, the explosive power or "yield" of the weapon, and the distance from the point of detonation (ground zero). Bursts are usually categorized as one of five types - high altitude, air, surface, underground, or underwater. It is assumed that in an attack on the United States, either of two types of bursts would be employed - air or surface. Air bursts are generally employed against "soft targets" such as airfields, industrial facilities, and supply depots. Surface bursts are preferred for "hard" targets such as missile silos and underground command and control centers. As a rule, air bursts maximize blast damage while minimizing the generation of radioactive fallout. On the other hand, surface bursts limit damage to a relatively smaller area while producing significant quantities of radioactive fallout. The characteristics of both air and surface bursts are presented below:

Air Burst

The detonation altitude is below 100,000 feet and such that the resultant fireball does not touch the surface of the earth. For any given distance from ground zero, there exists an optimum burst height that will maximize the effects of blast over-pressure for that distance.

Since the fireball does not touch the surface of the earth, fallout and residual radiation are essentially limited to the irradiated surviving portions of the weapon casing and delivery vehicle, unexpended portions of the weapon's fission trigger, and radiation produced by detonation of the fission trigger.

Surface Burst

The detonation altitude is such that the fireball touches the surface of the earth. No significant cratering results unless the burst height is 450 feet or less. Blast over-pressure damage is concentrated limited in comparison to that produced by an air burst. When the fireball touches the surface of the earth, surface debris is pulled into the fireball and irradiated. This material eventually returns to the earth as radioactive "fallout."

Nuclear Weapons Effects

The detonation of a thermonuclear weapon produces five distinct and appreciable effects - blast, thermal radiation, initial ionizing radiation, radioactive fallout, and electromagnetic pulse. Each of these phenomena is discussed below:

Blast

Blast is used to refer to the shock wave and attendant high velocity winds that produce sudden, dramatic changes in air pressure. The magnitude of the blast effect (over pressure) is measured in pounds per square inch in excess of normal atmospheric pressure at sea level (14.7 lbs psi). Generally, the over-pressure destroys or damages structures while the high velocity wind damages other objects and produces casualties.

Thermal Radiation

Thermal radiation is a burst of intense light and heat produced at detonation - similar to the effects of exposure to a two-second flash from an enormous sun lamp. This phenomenon can start fires as well as produce casualties. A one megaton explosion can produce flash blindness up to 13 miles on a clear day or 53 miles on a clear night. Thermal radiation can cause skin and retinal burns relatively close to the point of detonation. A one megaton explosion can cause first degree burns at distances of approximately seven miles, second degree burns at approximately six miles, and third degree burns at approximately five miles from ground zero. Current US medical facilities could treat between 1,000 and 2,000 severe burn patients at a time; detonation of a single thermonuclear weapon could produce more than 10,000 such casualties.

Initial Radiation

Initial radiation is emitted during the first minute after detonation. It is composed of gamma rays and neutrons. For large yield weapons, the range of the initial radiation is less than that of the lethal blast and thermal radiation effects. However, with respect to small yield weapons, the initial radiation may be the lethal effect with the greatest range. This is significant when considering a terrorist threat involving nuclear weapons.

Fallout

Fallout is produced by surface debris drawn into and irradiated by the fireball. It rises into the atmosphere and eventually returns to earth. A source of ionizing radiation, fallout may be deposited miles from the point of detonation and thus affect people otherwise safe from the direct effects of the weapon. The radiation danger associated with fallout decreases as the radioactive material decays. Decay rates range from several minutes to several years.

Fallout distribution is determined by weapon yield, type and height of burst, fission/fusion ratio, weather conditions, wind speed, and wind direction. For planning and operational purposes, the radiation situation in an area can be classified in three categories:

- Negligible (NEGRAD) - the fallout radiation level never exceeds 0.5 rems/hour
- Moderate (LORAD) - the fallout radiation level is between 0.5 and 50 rems/hour
- Severe (HIRAD) - the fallout radiation exceeds 50 rems/hour

Electromagnetic Pulse (EMP)

EMP describes intense electric and magnetic fields that can damage unprotected electronic equipment. The effect is most pronounced in high altitude bursts (above 100,000 feet). Surface bursts typically produce significant EMP up to the one psi over-pressure range while air bursts produce somewhat less. No evidence exists suggesting that EMP produces harmful effects in humans.

Risk Areas And Effects

With respect to the immediate effects of nuclear weapons, exclusive of thermal radiation-induced fire, risk areas are categorized as very high, high, medium, and low, depending on the degree of blast over-pressure received. Risk area definitions (and effects likely to be experienced within the boundaries of those risk areas) are presented below:

Very High

These areas are subject to receiving blast over-pressure equal to or greater than 10 psi. The thermal radiation range is 100 calories/centimeter plus, and initial radiation 100 rems plus (surface burst). Effects likely to be experienced include:

- Destruction of above ground structures
- Winds in excess of 260 mph
- Extensive debris deposition hampering ingress and egress
- Ignition of exposed, unprotected flammable materials
- Numerous fires caused by ruptured gas mains and household connections
- Broken water mains
- Severe skin burns to exposed, unprotected persons (95-100% fatalities)

High

These areas are subject to blast over-pressure equal to 5 psi, but less than 10 psi. The thermal radiation range is 50-225 calories/centimeter. Initial radiation is up to 100 rems. Effects likely to be experienced include:

- Severe damage to reinforced concrete structures - wood frame structures destroyed
- Winds 160-280 mph
- Significant debris deposition
- Ignition of exposed flammable materials
- Numerous fires
- Broken water mains
- Severe skin burns to exposed, unprotected population
- Approximately 50% fatalities (40% of the population experiences some degree of injury)

Medium

These areas are subject to blast over-pressure equal to 2 psi but less than 5 psi. The thermal radiation range is 10-100 calories/centimeter. There is negligible initial radiation. Effects likely to be experienced include:

- Moderate damage to reinforced structures - severe damage to wood frame structures
- Winds of 70-160 mph
- Light to moderate debris deposition
- Scattered fires
- Second and third degree burns to exposed, unprotected population
- 5% fatalities (45% of the population suffers some degree of injury)

Low

These areas are subject to blast over-pressure equal to .5 psi but less than two psi. The thermal radiation range is up to 30 calories/centimeter. There is negligible initial radiation. Effects likely to be experienced include:

- Moderate to light structural damage to all buildings
- Winds of 8-70 mph
- Light debris deposition
- Scattered fires
- Second and third degree burns to exposed, unprotected population
- Few fatalities (25% of the population may experience some degree of injury)

Special Situation

In the event of a nuclear attack, radioactive fallout will most likely be present in varying degrees in many areas of the county. The geographical extent and specific intensity of this fallout contamination will depend on the total weight and distribution of the attack, as well as: the design and manner of detonation of the weapons; the physical composition of buildings or soil under the weapons burst (along with the topography); and wind and weather. During various wind and attack combinations, any area of the county could experience a serious fallout condition.

Fallout from nuclear weapon detonations emits ionizing radiation which could cause numerous casualties; prevent and/or delay carrying out emergency post-attack operations; and deny the use of some areas and vital facilities unless effective countermeasures are expeditiously applied. A capacity to detect, measure, and report levels of fallout radiation (along with the capability to receive and evaluate this information) is necessary for making decisions affecting:

- Shelter occupancy periods
- Necessity for fire suppression around shelters (regardless of radiation levels)
- Providing water, food, and other supplies for sheltered and displaced persons
- Implementation of rescue, first aid, medical, and welfare operations
- Relocation of people from areas of high radiation intensity
- Restoration and/or continuance of vital facilities (particularly utilities)
- Radiation exposure control for workers accomplishing these tasks in the fallout area

All of the above assume the detonation is a surface burst and will cause fallout. However, if it is an air burst no fallout will be generated and sheltering survivors from radiation may be necessary only for limited periods.

Emergency Response Actions

Emergency response actions associated with the above situations are presented in Volume One, Operations Section Event Specific Checklist.

Exhibits

Exhibit 1 - Terrorism

Exhibit 2 - Nuclear Weapons Accident

EXHIBIT 1

TERRORISM

GENERAL SITUATION

San Mateo County has a diverse population of just less than a million persons. The County is also home to many business and government agencies, transportation infrastructure, and cultural facilities which are vulnerable to terrorist attack. Terrorism remains a continuing threat throughout the world and within the United States. A variety of political, social, religious, cultural and economic factors underlie terrorist activities. Terrorists occasionally target civilian targets to spread their message or communicate dissatisfaction with the status quo. The media interest generated by terrorist attacks makes this a high visibility threat.

SPECIFIC SITUATION

Recent trends toward large-scale incidents generating significant casualties make preparedness and the mechanisms for effective response essential. The destruction of the World Trade Center in New York City and the damage to the Pentagon in Washington DC on September 11, 2001, the bombings of the Murrah Federal Building in Oklahoma City and the Centennial Park Olympic Games in Atlanta have not only demonstrated this but have shown the extensive damage that can be afflicted on people and property. In addition to large-scale attacks, a full range of assault styles must be considered. Contemporary terrorist activity runs the gamut from simple letter bombings, through assassinations with small arms, up to and including major car bombings.

Bombings and arson remain significant sources of terrorist activity. Related threats include bomb threats which disrupt the normal operations of transit systems and government or corporate facilities. Venues likely to suffer the impact of terrorism include aviation targets, mass transit targets, and government facilities. Entertainment and cultural facilities may also be targeted. Conventional political motivations for terrorism continue; however, issues involving weapons proliferation, organized crime and narcotic trafficking are seen as having increasing influence. The potential for nuclear, biological, or chemical (NBC) terrorism employed by sub-national actors also is a potential concern.

Recent events make nuclear, biological, chemical (NBC) emergencies a plausible scenario necessitating detailed contingency planning and preparation of emergency responders to protect the civilian populace in major urban centers such as the Bay Area. Among the events heightening the threat level are the Sarin attack on the Tokyo subway, followed by an attempted cyanide assault on the subway six weeks later. The presence of cyanide residue in the debris of the World Trade Center bombing in New York heightens domestic concern. Biological incidents of note include the synthesis of Ricin by an anti-government, tax protest group whose members were convicted for violating the Biological Weapons Anti-Terrorism Act. Nuclear terrorism occurred in Moscow when Chechen insurgents claimed to have placed radiological waste in Moscow parks to further their cause.

The Federal Bureau of Investigation (FBI) is the lead federal agency with responsibility for crisis management (efforts geared toward preventing, interdicting and responding to the criminal aspects of terrorism) at all terrorist acts within the United States. In the Bay Area, the FBI closely coordinates this activity with local law enforcement through the San Mateo Sheriffs Office and local city Police Departments. Efforts to resolve life safety threats to the public, including firefighting, rescue operations, and treatment of persons wounded by terrorist activity are known as consequence management. These

efforts are the primary responsibility of local government and require close coordination between law enforcement, the fire service, health care and medical providers. During response to terrorism acts these efforts are coordinated through the Sheriff's Office and are addressed in the County Operational Area Terrorism Response Annex. The Sheriff's EOB has responsibility for marshaling interagency consequence management efforts.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to common hazards are presented in County departments' Emergency Plans.

EXHIBIT 2

NUCLEAR WEAPONS ACCIDENT

General Situation

Nuclear weapons are transported by air, rail, and highway. Transportation accidents have occurred in the past and could occur again. An accident in which there is no release of the fissionable material is a "Bent Arrow" and one involving release is a "Broken Arrow."

Specific Response

All accidents involving military aircraft which may be carrying military weapons, or train or truck accidents involving military weapons, should be reported immediately to the California OES. California OES will contact Joint Nuclear Accident Coordinating Committee (JNACC). This group is responsible for tracking nuclear weapons shipments. They will advise DEM if a nuclear weapon was present. DEM will relay the information to the local jurisdictions.

Concurrently, and particularly if a nuclear weapon was involved, the nearest military base will dispatch security forces to cordon off the area and declare it a National Defense Zone. This zone is a temporary Federal Reserve and under the control of the federal government. It will be maintained until any national defense secret material (including portions of the weapon) is removed. Once that is done, the area returns to the jurisdiction of the local government.

Clean-up of radioactive material will be a joint federal, state, and local effort. The state Department of Health Services - Radiologic Health Branch (RHB) is responsible for identifying and controlling contamination. RHB will determine when clean-up is complete and the area is safe to re-enter.

If there is a fire during a Broken Arrow the radioactive materials may have been carried great distances in the smoke plume. In this case, RHB is responsible for making sure the radioactive materials do not enter the food chain.

Food chain contamination is the greatest radiological hazard. This is because the radioactive isotopes found in weapons emit primarily alpha particles and have only limited emissions of gamma and beta radiation. Alpha particles are not a significant hazard unless the alpha emitter gets into the body. Once inside, it can do significant damage. For this reason, the state (primarily RHB and California OES) will work closely with the local jurisdictions to identify and remove the radioactive contamination from the environment.

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CHAPTER FOUR

RECOVERY

INTRODUCTION TO RECOVERY ISSUES

Recovery from the effects of a major disaster begins immediately and may continue for many years after the emergency period. Recovery requires the efforts of residents, businesses, non-profit organizations, county government, state government, and federal agencies. Coordination of these efforts is critical to the recovery process.

DISASTER ASSISTANCE PROGRAMS

When requesting implementation of disaster assistance programs, some key areas of concern must be adequately addressed. These areas include the needs of distinct groups, disaster assistance available at each level of declaration, and the level of detail required on each request for disaster assistance. The disaster assistance programs have been developed for the needs of four distinct groups:

- Individuals
- Businesses (including agriculture interests)
- Governments
- Non-profit organizations

Individuals

Individuals may receive loans or grants for real and personal property, dental, funeral, medical, transportation, unemployment, sheltering, and rental assistance, depending on the extent of damage.

Businesses

Loans for many types of businesses are often made available through the United States Small Business Administration, assisting with physical and economic losses as a result of a disaster or an emergency.

Agriculture

Programs exist for agricultural or other rural interests through the United States Department of Agriculture, including assistance for physical and production losses.

Government

Funds and grants are available to government and certain non-profit organizations to repair, reconstruct, and mitigate the risk of future damage.

A state grant program is available to local governments to respond and recover from disasters. Federal grant programs are available to assist governments and certain non-profit organizations in responding to and recover from disasters.

At each level of emergency declaration, various disaster assistance programs become available to each of the following groups:

- Individuals
- Businesses (including agriculture interests)
- Governments
- Non-profit organizations

Local Emergency Declaration

Under local emergency declarations, Los Angeles Valley College will be eligible for assistance under the Natural Disaster Assistance Act (with the OES Director's concurrence).

Businesses and individuals may be eligible for local government tax relief, low-interest loans from the United States Small Business Administration, and relief programs under the United States Department of Agriculture.

State of Emergency Proclamation

Counties, special districts, individuals, and businesses may be eligible, in addition to the assistance available under a local emergency declaration, for services from the following agencies:

- Contractor's License Board
- Department of Motor Vehicles
- Department of Aging
- Department of Insurance
- Department of Social Services
- Franchise Tax Board Tax Relief
- State Board of Equalization
- Department of Veteran's Affairs

Presidential Declaration

Under a Presidential Declaration, the county, special districts, individuals, and businesses may be eligible for the following disaster assistance programs and services:

- Cora Brown Fund
- Crisis Counseling Program
- Disaster Unemployment
- Temporary Housing Program
- Individual and Family Grant Program
- Internal Revenue Service Tax Relief
- Public Assistance
- Hazard Mitigation
- Veteran's Affairs Assistance
- Federal Financial Institutions

Public Assistance Program Responsibilities

Each jurisdiction and special district has the responsibility for completion and submittal of the required documents for both state and federal public assistance programs.

In Los Angeles County the Office of Emergency Services (OES) will complete the necessary public assistance program application and supporting materials for the county. The county OES will also serve as the primary contact for state and federal field representatives. The City of Long Beach's Office of Emergency Services will complete the application process and provide supporting materials to state and federal representatives. At Los Angeles Valley College the Finance and Recovery Unit will complete the application materials and coordinate with state and federal representatives.

The following outline the Federal Public Assistance Program and the State of California's Public Assistance Program, the Natural Disaster Assistance Act (NDAA).

Federal Public Assistance ProgramAuthorities and Required Declarations

The federal public assistance program is authorized under the Federal Disaster Relief Act of 1974, as amended by the Robert T. Stafford Disaster Relief and Emergency Assistance Amendments of 1988. The federal program requires a local emergency declaration, state of emergency proclamation, and a federal declaration of a major disaster or emergency.

Eligible Applicants

State agencies, counties, cities, special districts, K-12 schools, Colleges, private non-profit organizations. The private non-profit organizations include educational, utility, emergency, medical, and custodial care facilities.

Private non-profit organizations who manage and operate essential governmental services facilities such as community centers, libraries, homeless shelters, senior citizen centers, shelter workshops, and similar facilities that are open to the general public are also eligible under the federal public assistance program.

Private non-profit organizations must, when applying for assistance, produce a letter from the Internal Revenue Service that grants them tax exempt status. They must also provide satisfactory evidence from the State of California showing they are a non-revenue-producing organization.

Eligible Work Projects

Eligible Work Projects:

- work project must be required as a result of a disaster event
- work project must be located within the designated disaster area
- work project must be the legal responsibility of the applicant

There are seven categories of work projects under the federal program:

- Category A - Debris Clearance
- Category B - Emergency Protective Measures
- Category C - Road System Repairs
- Category D - Water Control Facilities
- Category E - Buildings and Equipment
- Category F - Public Utility System
- Category G - Other (Parks, Recreational Facilities, etc.)

To qualify under the federal program, removal of debris from privately or publicly owned lands and waters must meet several objectives:

- eliminate immediate threats to life, public health, and safety
- eliminate immediate threats of significant damage to improved public or private property
- ensure economic recovery of the affected community at large

Measures undertaken to preserve public health and safety must meet several objectives:

- eliminate or lessen immediate threats to life, public health, and safety
- eliminate or lessen immediate threats of significant damage to improved public/private property
- eliminate or lessen immediate threats of additional damage to improved public or private property through cost-effective measures

Examples of emergency protective measures include shelter, temporary repairs, National Guard emergency labor, emergency communications, emergency transportation, and cooperative agreement costs.

Permanent restoration

Permanent restoration of eligible facilities will be based on the design of such facilities as they existed immediately prior to the disaster, and in conformity with current codes and standards. Standards must meet the following objectives:

- apply to the type of repair or restoration required
- be appropriate to the pre-disaster use of the facility
- be in writing and adopted prior to project approval
- apply uniformly to all similar types of facilities within the jurisdiction of the code granting authority

A facility is considered repairable when repairs can restore the facility to the pre-disaster function and the cost of such repairs can be made at a cost less than the estimated replacement cost of the damaged facility.

When a facility is deemed non-repairable by the FEMA Region IX Director, approved restorative work shall include replacement of the facility on the basis of pre-disaster design, in conformity with applicable codes and standards for new construction. The FEMA Region IX Director may require and approve funding for restoration of a destroyed facility at a new location when the facility is and will be subject to repetitive heavy damage.

Facilities that were not in active use at the time of the disaster are not eligible except in those instances where the facilities were temporarily inactive due to repairs or remodeling. Reasonable repair costs for equipment are eligible or, if destroyed, equipment may be replaced with a comparable item. Replacement is subject to current fair market value, less salvage and/or insurance recovery.

Eligible Cost

Generally, in order for costs for work projects to be eligible, they must meet the following standards:

- necessary and reasonable
- authorized or not prohibited under state, local, or other federal laws, regulations, or other governing limitations
- consistent with policies, regulations, and procedures that apply uniformly to federal assistance and other activities of the unit government
- treated consistently through application of generally accepted accounting principles
- not allocable to or included as a cost of any other federally financed program
- net amount of all applicable credits

Eligible wage costs include

Overtime and overtime fringe benefits only for emergency protective measures performed by force account labor. Regular and overtime wages are eligible for permanent work performed by force account labor. If labor is contracted, whether emergency or permanent work, all costs are eligible: Extra hire costs; Limited Supervisor or management staff salaries; and Compensatory Time Off (CTO).

Eligible equipment costs include

Regulations allow for reimbursement for ownership and operation of costs of applicant-owned equipment used to perform eligible work. Reimbursement rates under local guidelines are established from the FEMA Schedule of Equipment Rates. Equipment damaged or destroyed as result of the disaster is also eligible. Rental equipment is reimbursed under a "reasonableness" rate schedule, as determined by FEMA

Consumable Supplies and Materials and Cooperative Agreements

Consumable supplies that are eligible under the federal program include hand tools, materials, and other supplies used for the work project. Direct costs associated with cooperative agreements are also eligible under the federal program.

Administrative Allowances

Allowances for necessary costs of requesting, obtaining, and administering federal disaster assistance subgrants are as follows:

\$0 - \$99,999	3 percent
\$100,000 - \$999,999	2 percent
\$1,000,000 - \$4,999,999	1 percent
\$5,000,000 and up	.5 percent

Applying for Assistance Under the Federal Public Assistance Program

The governor's Office of Emergency Services (OES) is responsible for processing all subgrants for applicants, including providing technical assistance and advice to subgrantees, providing state support for damage survey activities, ensuring that potential applicants for assistance are aware of available federal assistance, and, submitting documents necessary for grant awards. The state OES conducts briefings for public officials and potential applicants. The applicant process and requirements for the city of City of Long Beach and other members of the Los Angeles County Operational Area are as follows:

- Notice of Interest submittal within 30 days of the federal programs activation
- List of Projects (Exhibit B)
- Resolution Designating an Authorized Representative
- OES Project Application (OES 89)

Damage Survey Report (DSR)

Once the OES Project Application is received, a joint state/federal inspection team comes to the requesting jurisdiction to perform a Damage Survey Report (DSR). The DSR identifies the scope of work and the quantitative estimate of cost of each work project. The inspection team prepares a DSR data sheet for each project listed on the List of Projects. A project means all work performed at a single site. A large project is a project with an approved estimate of costs of \$43,600 or more. A small project is a project with an approved estimate of costs under \$43,600. Any damage not shown to the inspection team during its initial visit must be reported to the FEMA Region IX Director, through the governor's authorized representative (GAR), within 60 days following the completion of the initial visit. For large projects over \$200,000, a construction monitoring program must be implemented. Within 45 days of receipt of the application for federal public assistance, the DSRs are reviewed by the FEMA Region IX Director and a decision to obligate the funds will be rendered. Once the projects are approved, State OES must submit quarterly progress reports to the FEMA Region IX Director.

Supplements to the original application may be approved for substantial errors or omissions, overruns/under-runs caused by variations in unit prices (cost adjustments), and changed site conditions/scope adjustments. Changes to small projects will normally be adjusted at the time of final inspection or an offsetting procedure will be implemented. Supplements should be requested at the earliest possible time and prior to completion of the work in question. Requests for a change in scope must be filed prior to work commencement on a *Damage Verification Form*.

If you do not agree with the inspection team's estimate, you may indicate your non-concurrence with the DSR. In addition to indicating your non-concurrence on the DSR form, you may also submit a letter of non-concurrence to state OES. In this letter, include the reasons why you disagree with the inspection team's estimate. Provide as much supporting documentation with your letter. State OES will recommend that FEMA review the DSR to reinstate eligible costs before the DSR is approved. The letter to the state OES should include the disaster number, the Los Angeles County County's federal Project Application Number (PA Number), and the Damage Survey Report (DSR) number(s).

Work Project Funding

To receive payment, the subgrantee must have a resolution that designates an authorized representative, filed an OES project application, and have a vendor data record (STD 204). Work project funding is subject to FEMA/State Agreement and 75 %/ 25 % federal/state and local costs shares, as established as the minimum under the Stafford Act. Funding of improved projects are subject to the governor's authorized representative's (GAR) approval. Alternate projects are subject to the FEMA Region IX Director's approval and will be penalized 10 %. Payments for administrative allowances and small projects are automatic advance payments (after supplement approval). Payments for large projects must be requested on a *Request for Reimbursement* form (OES 131). Reimbursement payments are sent in the form of progress payments, withholding 25 % until after final inspection or audit.

Completion Deadlines

The following deadlines have been established for each work category:

Debris Clearance	6 Months*
Emergency Work	6 Months*
Permanent Work	18 Months*

* Dates established from date of major disaster declaration

The GAR may extend deadlines, when justified, as follows:

Debris Clearance	6 Months
Emergency Work	6 Months
Permanent Work	30 Months

The FEMA Region IX Director may extend the deadline beyond these dates, with adequate justification. Costs are allowed only to date of last approved time extension.

Final Claim

The applicant must submit final claim within 60 days of the completion of all approved projects. A state engineer will complete an onsite inspection of all completed projects. A final audit is performed. The applicant must retain all records for six years.

State Natural Disaster Assistance Act (NDAA) Program

Authorities and Required Declarations

The State Natural Disaster Assistance Act (NDAA) Program is authorized under Title 19, Subchapter 5, the Natural Disaster Assistance Act, California Code of Regulations. NDAA requires a local government to declare a local emergency within 10 days of the incident. For permanent restoration assistance under NDAA, the director of the governor's Office of Emergency Services (OES) must concur with the local declaration. For disaster response and permanent restoration assistance under NDAA, the Governor of California must proclaim a state of emergency. For matching fund assistance for cost sharing required under federal public assistance programs, the President of the United States must declare a major disaster or emergency.

Eligible Applicants

Eligible applicants for NDAA include city and county, counties, cities, special districts, school districts, county offices of education, community College districts.

Eligible Work Projects

Eligible Work Projects:

- work project is a result of a natural disaster (fire, flood, earthquake, Tsunami, etc.)
- work project is performed within area covered by the local declaration
- work project is the responsibility of the applicant agency

There are seven (7) categories of work projects under the federal program:

- Category A - Debris Clearance
- Category B - Emergency Protective Measures
- Category C - Road System Repairs
- Category D - Water Control Facilities
- Category E - Buildings and Equipment
- Category F - Public Utility Systems
- Category G - Other (Parks, Recreational Facilities, etc.)

Eligible Cost

Eligible costs generally include local agency personnel regular hourly wage and overtime costs. Also included are equipment costs, the cost of supplies and materials used during disaster response activities incurred as a result of a state of emergency proclaimed by the governor. Excluded are the normal hourly costs of regularly assigned emergency services and public safety personnel. Costs to repair, restore, reconstruct, or replace public facilities belonging to local agencies are also eligible. Matching fund assistance for cost-sharing required under federal public assistance programs is an eligible cost. Indirect costs, based on the *Indirect Cost Rate Proposal*, as approved by the state controller's office is an eligible cost (40 % maximum, subject to state/local cost sharing). A 4 % allowance for administrative cost is also eligible for NDAA funding, subject to state/local cost-sharing.

Eligible Wages

Eligible wages under the NDAA program now follow the same guidelines as the federal public assistance program. That is, the state will not assume any regular time costs which are ineligible under the federal program. The state will cost share any wages which are eligible for federal program funding.

Eligible Equipment Costs

Actual reasonable equipment rental costs are eligible. Force account equipment may be claimed based on the applicant's own rate schedule or, in the absence of such a rate schedule, current Department of Transportation Labor Surcharge and Equipment Rental Rates.

Supplies, Materials and Cooperative Agreements

Consumable supplies that are eligible under NDAA include hand tools, materials, and other supplies used for the work project. Costs for work performed under cooperative agreements between local governments are eligible under NDAA, but shall be limited to those costs of the responding entity for which an applicant is legally obligated to pay.

Applying for Assistance under NDAA

The Governor's Office of Emergency Services (OES) is responsible for transmitting applications for NDAA to all eligible applicants. The State OES conducts briefings for public officials and potential applicants. Project application for assistance (NDAA Form 1) must be filed within 60 days of the date of the local declaration. The application must include the *List of Projects* (Exhibit B) and a *Resolution Designating an Authorized Representative* (OES Form 130). In the event of a federal major disaster declaration, the federal *Notice of Interest* (NOI) establishes eligibility in both programs.

Damage Survey Reports (DSR)

Damage surveys are conducted by a state engineer accompanied by a local representative. The engineer prepares a DSR for each project reported on the "List of Projects." The DSR identifies the scope of work and the quantitative estimate of cost of each work project. All damage sites must be reported within the 60-day application period. All sites must be surveyed within 60 days of the date of a local agency's application. DSRs are reviewed and approved by the Chief, Disaster Assistance Division. The complete application, with copies of approved DSRs, DSR summary, and a cover letter, will be sent to applicants for review and approval. The *Applicant Approval* forms (Exhibit D) must be returned to State OES within 10 days from date of approval letter.

Supplements to the original application may be approved for substantial errors or omissions, overruns/underruns caused by variations in unit prices (cost adjustments), and changed site conditions/scope adjustments. Changes to small projects will normally be adjusted at the time of final inspection or an offsetting procedure will be implemented. Supplements should be requested at the earliest possible time and prior to completion of the work in question. Requests for a change in scope must be filed prior to work commencement.

If you do not agree with the inspection team's estimate, you may indicate your non-concurrence with the DSR. In addition to indicating your non-concurrence on the DSR form, you may also submit a letter of non-concurrence to state OES. In this letter, include the reasons why you disagree with the inspection team's estimate. Provide as much supporting documentation with your letter. State OES will recommend that FEMA review the DSR to reinstate eligible costs before the DSR is approved. The letter to state OES should include the disaster number, the Redwood City's federal Project Application Number (PA Number), and the Damage Survey Report (DSR) number(s).

Work Project Funding

Eligible projects are subject to 75 %/25 % state/local cost sharing. The local share may be waived. Project applications resulting in a state share of less than \$2,500 will not be approved. Replacement provisions of the NDAA operation are similar to those applied for federal "Improved Project." NDAA funds can be used for the local share of a federal *Alternate Project* when the program is implemented under federal major disaster declaration. An applicant may receive up to 90% of the estimated State share of a project as an advance. Advances must be requested, using a "Request for Advance" form (NDAA Form 3). Applicants are expected to comply with federal requirements when federal funds are involved. Applicants are expected to fully pursue federal funds otherwise available in the absence of State financial assistance. State funds cannot be used to replace funds lost through noncompliance with other program requirements.

Completion Deadlines

When federal funds are involved, the federal deadlines apply. In the event of a director's concurrence with a local declaration or a governor's proclamation of a state of emergency, the following deadlines apply:

- Debris Clearance 6 months from date of declaration
- Emergency Work 6 months from date of declaration
- Permanent Work 18 months from date of declaration

Extensions are allowable with adequate justifications.

Final Claim

Applicant must submit final claim within 60 days of the completion of all approved projects. A state engineer will complete an on-site inspection of all completed projects. Claims including more than \$50,000 in state assistance will be subject to a field audit. Any funds owed to an applicant by the state will be paid after final determination of eligible costs by state OES and after review of the final inspection report or audit.

Individual Assistance Program Responsibilities

Individuals are expected, whenever possible, to provide for themselves and be responsible for their own personal recovery. However, many individuals will expect the county and cities to deliver assistance to them well after the disaster. Both the county and cities will assist individuals in any way possible, including providing them with the Federal Emergency Management Agency's (FEMA) hotline number for individual assistance. A *Sequence of Delivery Guide* has been developed by FEMA to assist individuals and local governments in determining the flow of individual assistance. The objective of City of Long Beach and Los Angeles County is to provide the citizens of their community with all the necessary information to help themselves recover from the disaster. The sequence of delivery appears as follows:

- Individual actions for assistance (family, friends, volunteer organizations, churches, etc.)
- Recovery/Assistance from private insurance carrier
- FEMA Disaster Housing Assistance
- United States Small Business Administration Assistance
- Individual and Family Grant Program Assistance
- Cora Brown Fund Assistance

The Los Angeles County Operational Area's objective is to provide Los Angeles Valley College with all the necessary information so they may help themselves recover from a disaster. A brief summary of some individual assistance programs and services are listed below:

- American Red Cross (ARC)
Provides for the critical needs of individuals such as food, clothing, shelter, and supplemental medical needs. Provides recovery needs such as furniture, home repair, home purchasing, essential tools, and some bill payment may be provided. Contact local *ARC*.
- Cora Brown Fund
Funds may be used for disaster-related needs that have not or will not be met by government or other organizations that have programs to address such needs. These funds are awarded through *FEMA*.
- Crisis Counseling Program
Provides grants to state and county mental health departments, who in turn provide training for screening, diagnosing, and counseling techniques. Also provides funds for counseling, outreach, and consultation for those affected by disaster. Individuals and government should contact local mental health agency.
- State Department of Aging
Provides special outreach services for seniors, including food, shelter, and clothing. Individuals may contact the *California Department of Aging* for a referral to nearest location.
- State Department of Consumer Affairs
Offers consumer information, investigates and corrects price gouging, and provides a toll-free number so that consumers can check on license status of contractors.

- State Department of Insurance
Provides assistance in obtaining copies of policies and provides information regarding filing claims. Contact *California Department of Insurance*.
- Department of Motor Vehicles
May offer waivers of certain fees. Contact *California Department of Motor Vehicles*.
- Department of Veteran's Affairs
Provides damage appraisals and settlements for VA-insured homes, and assists with filing of survivor benefits. Contact the *California Department of Veteran's Affairs*.
- United States Department of Agriculture
Assistance provided includes Federal Crop Insurance, Emergency Conservation Program, Non-Insured Assistance, the Agriculture Conservation Program, Emergency Watershed Protection, Rural Housing Service, Rural Utilities Service, and Rural Business and Cooperative Service. Contact the *Los Angeles County County Agriculture Commissioner* regarding these programs.
- Disaster Unemployment
Provides weekly unemployment subsistence grants for those who become unemployed because of a major disaster or emergency. Applicants must have exhausted all benefits for which they would normally be eligible.
- Federal Financial Institutions
Member banks of FDIC, FRS or FHLBB may be permitted to waive early withdrawal penalties for Certificates of Deposit and Individual Retirement Accounts.
- Franchise Tax Board
Following proclamation of a state of emergency by the governor, the legislature authorizes the acceptance of casualty loss deductions within the California tax returns of those affected. Applicants may contact the *California Franchise Tax Board*.
- Individual and Family Grant Program
Awards grants to individuals or families for disaster-related serious needs, such as moving and storage, medical, dental, funeral, essential personal or real property needs. Eligibility is dependent on the seriousness of need and exhaustion of FEMA and SBA funds. Referral to the program is automatic with FEMA registration and SBA application.
- Internal Revenue Service (IRS) Tax Relief
Provides extensions to current year's tax return, allows deductions for disaster losses, and allows amendment of previous tax returns to reflect loss back to three years. Victims may contact the IRS.

- **Menonite Disaster Service**
Provides assistance for repair of private residences and community facilities, warning, evacuation, and search. Also assists with cleanup and repair for elderly, disabled, and underinsured citizens. May also provide mental health support. Contact nearest Menonite Services location.
- **Salvation Army**
Assistance includes mobile feeding, emergency shelter, applicant registration, collection and distribution of clothing and supplies, counseling, language interpretation, and assistance in locating missing persons. Contact local *Salvation Army* for assistance.
- **State Board of Equalization**
Provides tax relief services which may allow for the transfer of tax basis to another property, exemptions for property losses, and deferment of a tax bill until the damaged property can be surveyed to reflect its value following a disaster. Contact the *California Board of Equalization*.
- **United States Small Business Administration**
May provide low-interest disaster loans to individuals and businesses who have suffered a loss due to a disaster. Submit request for SBA loan assistance to the state's *Southern Region Office of Emergency Services*.
- **Temporary Housing Assistance**
May provide for transient accommodations, rental assistance, mobile homes, furniture rental, mortgage assistance, and emergency home repairs. Individuals should call FEMA to register.

Hazard Mitigation Grant Program Responsibilities

Following a presidential disaster declaration, the Hazard Mitigation Grant Program (HMGP) is activated. The program's purpose is to fund projects which are cost-effective and which substantially reduce the risk of future damage, hardship, loss, or suffering resulting from a major natural disaster. Grants are available to eligible applicants in the declared areas only. Delivered as either part of a public assistance grant or as a stand-alone measure, mitigation projects must be cost-effective and represent a solution to a problem.

The HMGP fund is based upon a 15% share of the FEMA estimate of all Damage Survey Reports (DSRs) for public assistance work performed, and individual assistance costs. The federal contribution can be up to 75% of the cost of the hazard mitigation project approved for funding, with applicants providing match funding through a combination of either state, local, or private resources. HMGP funds cannot be used as the sole match for other federally funded programs.

Hazard Mitigation Grant Program

Eligible applicants include state agencies, local governments, and private non-profit organizations which own or operate facilities providing essential government services. Essential government services include educational facilities, utilities, emergency services, medical services, custodial care, etc. Although HMGP funds are based on a percentage of public assistance funding, awards are not limited to public projects, but must be sponsored by an eligible public entity.

Virtually all types of hazard mitigation projects are eligible, provided they benefit the declared disaster area and meet basic project eligibility. The priorities of funding will be established by the governor's Office of Emergency Services. Eligible projects must be cost-effective and substantially reduce the risk of future damage, hardship, loss, or suffering resulting from natural disasters.

Eligible projects must meet the following criteria:

- be consistent with the community's long-range hazard mitigation planning goals; represent significant risk if left unresolved
- address, when applicable, long-term changes to the areas and entities it protects, and have manageable future maintenance and modification requirements
- comply with all applicable codes and standards for the project locale
- have a direct beneficial impact upon the designated disaster area
- not fund personnel only - except for short-term projects which will result in long-term benefits
- not cost more than the anticipated value of the reduction in both direct damages and subsequent negative impacts were future disasters to occur
- provide solutions, rather than merely identify or analyze hazards, unless such constitutes a functional portion of a solution
- provide the most practical, effective, and environmentally sound solution, given a well-considered range of options

APPENDIX A

GLOSSARY

This glossary contains definitions of terms commonly used in the Standardized Emergency Management System (SEMS) and the Incident Command System (ICS).

A

Advance Element of the Emergency Response Team (ERT-A)

The portion of the Emergency Response Team (ERT) which is the first group deployed to the field to respond to a disaster incident.

Action Plan

The plan prepared in the EOC containing the emergency response objectives of an SEMS and ICS levels and reflecting overall priorities and supporting activities for a designated period. The plan is shared with supporting agencies.

Activate

At a minimum, a designated official of the emergency response agency that implements SEMS/ICS as appropriate to the scope of the emergency and the agency's role in response to the emergency.

Aerial Reconnaissance

An aerial assessment of the damaged area which includes gathering information on the level and extent of damage and identifying potential hazardous areas for on-site inspections.

After Action Report

A report covering response actions, application of SEMS/ICS, modifications to plans and procedures, training needs, and recovery activities. After action reports are encouraged following any emergency which requires a declaration of an emergency.

Agency

An agency is a division of government with specific function, or a non-governmental organization (e.g., private contractor, business, etc.) that offers a particular kind of assistance. In SEMS/ICS, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation), or assisting and/or cooperating (providing resources and/or assistance). (See Assisting Agency, Cooperating Agency, and Multi-Agency)

Agency Assistance

Grants for projects or planning activities, loans, and all other forms of financial or technical assistance provided by the agency.

Agency Dispatch

The agency or jurisdictional facility from which resources are allocated to incidents.

Agency Executive or Administrator

Chief executive officer (or designee) of the agency or jurisdiction that has responsibility for the incident.

Agency Representative

An individual assigned to an incident or to an EOC from an assisting or cooperating agency who has delegated authority to make decisions on matters affecting that agency's participation at the incident or at the EOC. Agency representatives report to the liaison officer at the incident or to the liaison coordinator at EOC levels.

Air Operations Branch Director

The person primarily responsible for preparing and implementing the air operations portion of the Incident Action Plan. Also responsible for providing logistical support to helicopters operating on the incident.

Allocated Resources

Resources dispatched to an incident.

American Red Cross

A quasi-governmental volunteer agency that provides disaster relief to individuals and families.

Area Command

An organization established to: (1) oversee the management of multiple incidents that are each being handled by an Incident Command System organization or (2) oversee the management of a very large incident that has multiple Incident Management Teams assigned to it. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources based on priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed.

Assigned Resources

Resources checked in and assigned tasks on an incident.

Assignments

Tasks given to resources to perform within a given operational period based on tactical objectives in the Incident or EOC Action Plan.

Assistant

Title for subordinates of the command staff positions at the Field ICS level. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions. Assistants may also be used to supervise unit activities at camps.

Assisting Agency

An agency directly contributing tactical or service resources to another agency.

Available Resources

Incident-based resources which are available for immediate assignment.

B**Base**

The location at an incident where primary logistics functions for an incident are coordinated and administered. There is only one base per incident. (Incident name or other designator will be added to the term "Base.") The Incident Command Post may be co-located with the base.

Base Flood

A term used in the National Flood Insurance Program to indicate the minimum size flood to be used by a community as a basis for its flood plain management regulations, presently required by regulation to be that flood which has a one-percent chance of being equaled or exceeded in any given year. Also known as a 100-year flood or one-percent chance flood.

Base Flood Elevation (BFE)

The elevation for which there is a one-percent chance in any given year that flood levels will equal or exceed it. The BFE is determined by statistical analysis for each local area and designated on the Flood Insurance Rate Map. It is also known as the 100-Year Flood.

Branch

The organizational level at the ICS Field Level having functional or geographic responsibility for major parts of incident operations. The branch level is organizationally between section and division/group in the Operations Section, and between section and units in the Logistics Section. Branches are identified by the use of Roman Numerals or by functional name (e.g., medical, security, etc.). Branches are also used in the same sequences at the EOC Levels.

Branch Director

The ICS title for individuals responsible for supervision of a branch at the field level.

C**Cache**

A pre-determined complement of tools, equipment and/or supplies stored in a designated location, and available for incident use.

Camp

A geographical site within the general incident area, but separate from the Incident Base. It is equipped and staffed to provide sleeping, food, water, and sanitary services to the incident personnel.

Care and Shelter

A phase of operations that meets the food, clothing, and shelter needs of people on a mass care basis.

Casualty Collection Points (CCP)

A location within a jurisdiction which is used for the assembly, triage (sorting), medical stabilization, and subsequent evacuation of casualties. It may be used for the receipt of incoming medical resources (doctors, nurses, supplies, etc.). Preferably, the site should include or be adjacent to an open area suitable for use as a helicopter pad.

Catastrophic Disaster

Although there is no commonly accepted definition of a catastrophic disaster the term implies to an event or incident which produces severe and widespread damage of such a magnitude as to result in the requirement for significant resources from outside the affected area.

Catastrophic Disaster Response Group (CDRG)

The national-level group of representatives from the federal department and agencies under the plan. The CDRG serves as a centralized coordinating group which supports the on-scene federal response and recovery efforts. Its members have access to the appropriate policy-makers in their respective parent organizations to facilitate decisions on problems and policy issues.

Chain of Command

A series of management positions in order of authority.

Check-In

The process whereby resources first report to an incident or into an EOC. Check-in locations at the field level include the incident command post (resources unit), incident base, camps, staging areas, helibases, helispots, and division supervisors (for direct line assignments).

Checklist

A list of actions taken by an element of the emergency organization in response to a particular event or situation.

Civil Air Patrol

A civilian auxiliary of the United States Air Force which provides personnel, services, and equipment for specified missions in support of state and local emergency operations.

Civil Disorder

Any incident intended to disrupt community affairs that requires police intervention to maintain public safety. Incidents may be riots and mass demonstrations as well as terrorist attacks.

Civil Preparedness Guidance (CPG)

A series of FEMA policy documents.

Clear Text

The use of plain English in radio communications transmissions. No Ten Codes or agency specific codes are used.

Code of Federal Regulations (CFR)

"49 CFR" refers to Title 49 - the primary volume regarding HAZMAT transportation regulations.

Command

The act of directing and/or controlling resources at an incident by virtue of explicit legal, agency, or delegated authority. May also refer to the Incident Commander.

Command Post

(See Incident Command Post)

Command Staff

The Command Staff at the field level consists of the information officer, safety officer, and liaison officer. They report directly to the Incident Commander. They may have an assistant or assistants as needed. These functions may also be found at the EOC levels in SEMS/ICS, although the proper term for the Section is the "Management Section". At the EOC level, the staff members would report to the EOC director of emergency management.

Communications Unit

An organizational unit in the Logistics section responsible for providing communication services at an incident or an EOC. A communications unit may also be a facility (e.g. a trailer or mobile van) used to provide the major part of an Incident Communications Center.

Community Right-to-Know

Legislation requiring communication of chemical information to local agencies or the public.

Compact

Formal working agreements among agencies to obtain mutual aid.

Claims Unit

Functional unit within the finance section responsible for financial concerns resulting from property damage, injuries, or fatalities at the incident or within an EOC.

Complex

Two or more individual incidents located in the same general area which are assigned to a single incident commander or to a unified command.

Comprehensive Emergency Management (CEM)

An integrated approach to the management of emergency programs and activities for all four emergency phases, (mitigation, preparedness, response, and recovery), all types of emergencies and disasters (natural, man-made, and attack), and all levels of government (local, state, and federal) and the private sector.

Computerized Hazard Identification Program (CHIP)

Part of FEMA's Integrated Emergency Management System, this evaluation program identifies the hazards posing the greatest threat to state and local governments and the capabilities of existing programs to respond (formerly referred to as Hazard Identification and Capability Assessment).

Continuity of Government (COG)

All measures that may be taken to ensure the continuity of essential functions of governments in the event of emergency conditions including line-of succession for key decision makers.

Contingency Plan

A sub- or supporting plan which deals with one specific type of emergency, its probable effect on the jurisdiction, and the actions necessary to offset these effects.

Cooperating Agency

An agency supplying assistance other than direct tactical or support functions or resources to the incident control effort (e.g., American Red Cross, telephone company, etc.).

Coordination

The process of systematically analyzing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra- or inter-agency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc. Multi-agency or Inter-agency coordination is found at all SEMS/ICS levels.

Coordination Center

Term used to describe any facility that is used for the coordination of agency or jurisdictional resources in support of one or more incidents.

Cost-Sharing Agreements

Agreements between agencies or jurisdictions to share designated costs related to incidents. Cost-sharing agreements are normally written, but may be verbal between authorized agency or jurisdictional representatives at the incident.

Cost Unit

Functional unit within the finance section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.

CPG 1-5 - Objectives for Local Emergency Management

Prepared by FEMA, this describes guide functional objectives that represent a comprehensive and integrated emergency management program.

CPG 1-8: Guide for Development of State and Local Emergency Operations Plans

Prepared by FEMA, this document describes how to write Emergency Operations Plans.

CPG 1-8a: Guide for the Review of State and Local Emergency Operations Plans

Prepared by FEMA, this publication provides FEMA staff with a standard instrument for assessing EOPs that are developed to satisfy the eligibility requirement for receiving Emergency Management Assistance (EMA) funding - also called the "crosswalk" checklist.

CPG 1-35: Hazard Identification, Capability Assessment, and Multi-Year Development Plan This plan for local governments is prepared by FEMA and is used as a planning tool to guide local jurisdictions through a logical sequence for identifying hazards, assessing capabilities, setting priorities, and scheduling activities to improve capability over time.

D**Damage Assessment**

The process is utilized to determine the magnitude of damage and the unmet needs of individuals, businesses, the public sector, and the community as a result of a disaster or emergency event.

Dam Failure

Part or complete collapse of a dam and usually causing downstream flooding.

Declaration

The formal action by the president to make a state eligible for major disaster or emergency assistance under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 3-288, as amended (the Stafford Act).

Declaration Process

When a disaster strikes, local authorities and individuals request help from private relief organizations and their state government which gives all possible assistance. If assistance is beyond their capability, the governor requests a presidential declaration of a major disaster or an emergency.

Delegation of Authority

A statement delegating authority and assigning responsibility provided to the incident commander by the agency executive. The delegation of authority can include objectives, priorities, expectations, constraints, and other considerations or guidelines as needed. Many agencies require written delegation of authority to be given to incident commanders prior to their assuming command on larger incidents.

Demobilization Unit

Functional unit within the planning section responsible for assuring orderly, safe and efficient demobilization of incident or EOC assigned resources.

Department Operations Center

An EOC used by a distinct discipline (such as fire, medical, hazardous material) or a unit (such as department of public works, department of health or local water district). Department operations centers may be used at all SEMS/ICS levels above the field response level depending upon the impacts of the emergency.

Deputy Incident Commander (Section Chief or Branch Director)

A fully-qualified individual who in the absence of a superior could be delegated the authority to manage a functional operation or perform a specific task. In some cases, a deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies may also be found as necessary at all EOC levels.

Designated Area

Any emergency or major disaster-affected portion of a state that has been determined eligible for federal assistance.

Direction and Control (Emergency Management)

The provision of overall operational control and/or coordination of emergency operations at each level of the statewide emergency organization. This may include the actual direction of field forces or the coordination of joint efforts of governmental and private agencies in supporting such operations.

Disaster

A sudden calamitous emergency event bringing great damage, loss, or destruction.

Disaster Application Center

A facility jointly established by the federal and state coordinating officers within or adjacent to an disaster-impacted area. It provides disaster victims a "one-stop" service for meeting their emergency representatives of local, state, and federal governmental agencies, private service organizations and certain representatives of the private sector.

Disaster Assistance Program

A program that provides state funding or reimbursement for local government response related personnel costs incurred in response to an incident as defined in Section 2402 (i).

Disaster Field Office

A central facility established by the Federal Coordinating Office within or immediately adjacent to disaster-impacted areas. It is utilized as a point of coordination and control for state and federal governmental efforts to support disaster relief and recovery operations.

Disaster Preparedness Improvement Grant Program (DPIG)

Authorized under Section 201 of the Stafford Act, it offers annual matching awards are provided to states to improve or update their disaster assistance plans and capabilities.

Disaster Recovery Manager (DRM)

The person appointed to exercise the authority of a regional director for a particular emergency or disaster.

Disaster Service Worker

Includes public employees and any unregistered person recruited into service during a state of war emergency, a state of emergency, or a local emergency by a person having authority to command the aid of citizens in the execution of his duties. It does not include any member registered as an active fire fighting member of any regularly organized volunteer fire department, and having official recognition, and full or partial support of the county, city, town, or district in which such fire department is located.

Disaster Support Area (DSA)

A predesignated facility anticipated to be at the periphery of a disaster area where disaster relief resources (manpower and material) can be received, accommodated or stockpiled, allocated, and dispatched to the disaster area. A separate portion of the area may be used for receipt and emergency treatment of casualties arriving via short-range modes of transportation (air and ground) and for the subsequent movement of casualties by heavy, long-range aircraft to adequate medical care facilities.

Disaster Welfare Inquiry (DWI)

A service that provides health and welfare reports about relatives and other individuals believed to be in a disaster area. This service operates when the disaster caused dislocation or disruption of normal communications facilities and precludes normal communications.

Dispatch

The implementation of a command decision to move a resource or resources from one place to another.

Dispatch Center

A facility from which resources are assigned to an incident.

Division

Divisions are used to divide an incident into geographical areas of operation. Divisions are areas identified by alphabetic characters for horizontal applications and often by numbers when used in buildings. Divisions are also used at EOC levels and are found organizationally between branches and units.

Division or Group Supervisor

The position title for individuals responsible for command of a division or group at an incident.

Documentation Unit

Functional unit within the planning section responsible for collecting, recording, and safeguarding all documents relevant to an incident or within an EOC.

Dose

Accumulated or total exposure to gamma radiation and commonly expressed in REMs.

Dosimeter

An instrument for measuring and registering total accumulated exposure to gamma radiation.

E**Economic Stabilization**

The intended result of governmental use of direct and indirect controls to maintain and stabilize the nation's economy during emergency conditions. Direct controls include setting or freezing of wages, prices, and rents or the direct rationing of goods. Indirect controls include government implementation of monetary, credit, tax, or other policy measures.

Emergency

A condition of disaster or extreme peril to the safety of persons and property caused by such conditions as air pollution, fire, flood, hazardous material incident, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestations or disease, a governor's warning of an earthquake, volcanic prediction, or other conditions (other than conditions resulting from a labor controversy).

Emergency Broadcast System

A system that enables the president and federal, state, and local governments to communicate through commercial radio and television broadcast stations with the general public in the event of a disaster. Now referred to as the Emergency Alert System (EAS).

Emergency Management (Direction and Control)

The provision of overall operational control and/or coordination of emergency operations at each level of the statewide emergency organization. It also may be the actual direction of field forces or the coordination of joint efforts of governmental and private agencies in supporting such operations.

Emergency Management Director (Emergency Services Director)

The individual within each political subdivision that has overall responsibility for jurisdiction emergency management coordination efforts.

Emergency Medical Services

Treatment of casualties necessary to maintain their vital signs prior to treatment at a medical center.

Emergency Medical Technician (EMT)

A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.

Emergency Operations

Those actions taken during the emergency period to protect life and property, care for the people affected, and temporarily restore essential community services.

Emergency Operations Center (EOC)

A location for performing centralized emergency management. EOC facilities are established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response during an emergency.

Emergency Operations Plan (EOP)

A jurisdiction plan for responding to appropriate hazards.

Emergency Period

A period which begins with the recognition of an existing, developing, or impending situation that poses a potential threat to a community. It may include the warning and impact phase and continue until immediate and ensuing effects of the disaster no longer constitute a hazard to life or threat to property.

Emergency Plans

Those official and approved documents which describe principles, policies, concepts of operation, methods, and procedures to be applied in carrying out emergency operations or rendering mutual aid during emergencies. These plans include such elements as continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information.

Emergency Preparedness Coordinator

The individual within each jurisdiction with the day-to-day responsibility for the development and maintenance of all emergency management coordination efforts.

Emergency Public Information (EPI)

Information disseminated to the public by official sources during an emergency, using broadcast and print media. EPI includes instructions on survival and health preservation action, disaster status information (number of deaths, injuries, property damage, etc.), and other useful information (available through state/federal assistance).

Emergency Public Information System

The network of information officers and their staffs operating from EPICs (centers) at all levels of government within the state. The system also includes the news media through which emergency information is released to the public.

Emergency Response Agency

Any organization responding to an emergency whether in the field, at the scene of an incident, or in an EOC may include an entity providing mutual aid to such an organization.

Emergency Response Personnel

Personnel involved with an agency's response to an emergency.

EOC Action Plan

The plan developed at EOC levels which contains objectives, actions to be taken, assignments, and supporting information for the next operational period.

Essential Facilities

Facilities that are vital to maintaining the health, safety, and overall well-being of the public following a disaster (e.g., hospitals, police and fire department buildings, utility facilities, etc.). May also include buildings that have been designated for use as mass care facilities (e.g., schools, churches, etc.).

Evacuee

An individual who moves or is moved from a hazard area to a less hazardous area with anticipation of return when the hazard abates.

Event

A planned, non-emergency activity. SEMS/ICS can be used as the management system for a wide range of events (e.g., parades, concerts or sporting events).

Exercise

A maneuver or simulated emergency condition involving planning, preparation, and execution carried out for the purpose of testing, evaluating, planning, developing, training, and/or demonstrating emergency management systems and individual components and capabilities. Provides ability to identify areas of strength and weakness for improvement of an emergency operations plan (EOP).

Exercise Scenario

Background detail (domestic, international, political, military) against which an exercise is conducted.

Expedient Shelter

Any shelter constructed in an emergency or crisis period on short notice by individuals, single families, or small groups of families.

F**Facilities Unit**

A functional unit within the support branch of the logistics section at the field response level that provides fixed facilities for the incident. These facilities may include the incident base, feeding areas, sleeping areas, sanitary facilities, etc.

Federal Agency (federal definition)

Any department, independent establishment, government corporation, or other agency of the executive branch of the federal government including the United States Postal Service, but not including the American Red Cross.

Federal Coordinating Officer (FCO)

The person appointed by the president to coordinate federal assistance following an emergency or major disaster declaration.

Federal Disaster Assistance

Consists of in-kind and monetary assistance to disaster victims, state, or local government by federal agencies under the provision of the Federal Disaster Relief Act and other statutory authorities of federal agencies.

Federal Disaster Relief Act

Public Law 93-288, as amended, that gives the president broad powers to supplement the efforts and available resources of state and local governments in carrying out their responsibilities to alleviate suffering and damage resulting from major peace-time disasters.

Federal Emergency Management Agency

The agency created in 1979 to provide a single point of accountability for all federal activities related to disaster mitigation and emergency preparedness, response, and recovery.

Federal Hazard Mitigation Officer (FHMO)

The FEMA employee responsible for representing the agency for each declaration in carrying out the overall responsibilities for hazard mitigation and for Subpart M including coordinating post-disaster hazard mitigation actions with other agencies of government at all levels.

Federal Insurance Administration (FIA)

The government unit (part of FEMA) that administers the National Flood Insurance Program.

FEMA-State Agreement

A formal legal document between FEMA and the affected state, it contains the understandings, commitments, and binding conditions for assistance applicable as the result of the major disaster or emergency declared by the president. It is signed by the FEMA regional director (or designee) and the governor.

Field Coordination Center

A temporary facility established by the office of emergency services within or adjacent to areas affected by a disaster. It functions under the operational control of the OES mutual aid regional manager and is supported by mobile communications and personnel provided by OES and other state agencies.

Field Operations Guide

A pocket-size manual of instructions on the application of the Incident Command System.

Finance/Administration Section

One of the five primary functions found at all SEMS/ICS levels and responsible for all costs and financial considerations. At any incident, the section may include the time unit, procurement unit, compensation/claims unit, and cost unit.

Flood Hazard Boundary Map (FHBM)

The official community map showing the boundaries of the flood plain and specially designated flood hazard areas. It is prepared by FEMA using the best flood data available at the time a community enters the emergency phase of the National Flood Insurance Program (NFIP). It is superseded by a Flood Insurance Map (FIRM).

Flood Insurance

The insurance coverage provided under the National Flood Insurance Program.

Flood Insurance Rate Map (FIRM)

The official community map prepared by FEMA showing the base flood elevation along with special hazard areas and the risk premium zones. The Flood Insurance Rate Map development is funded by FEMA and is based on detailed surveys and analysis of the site-specific hydrologic characteristics.

Food Unit

A functional unit within the Service branch of the Logistics section responsible for providing meals for incident and EOC personnel.

Function

In SEMS/ICS, function refers to the five major activities in the SEMS/ICS (i.e., Command, Operations, Planning, Logistics and Finance/Administration). The same five functions also are found at all SEMS EOC levels. At the EOC, the term "Management" replaces "Command." The term "Function" is also used when describing the activity involved (e.g., "the planning function").

Functional Element

Refers to a part of the incident, EOC, or DOC organization such as section, branch, group or unit.

G**General Staff**

The group of management personnel reporting to the incident commander or to the EOC director. They may each have a deputy, as needed. At the SEMS EOC and field ICS level, the general staff consists of the operations, planning, logistics, and finance section chiefs.

Generic ICS

Refers to the description of ICS that is generally applicable to any kind of incident or event.

Ground Support Unit

Functional unit within the support branch of the logistics section at the SEMS EOC and ICS field response level that is responsible for the fueling, maintaining, and repairing of vehicles, and the transportation of personnel and supplies.

Group

Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division). Groups are located between branches (when activated) and resources in the operations section.

H**Hazard**

Any source of danger or element of risk to people or property.

Hazard Area

A geographically defined area in which a specific hazard presents a potential threat to life and property.

Hazardous Material

A substance (or combination of substances) which, because of quantity, concentration, physical, chemical, radiological, explosive, or infectious characteristics, poses a substantial present or potential danger to humans or the environment. Generally, such materials are classified as explosives and blasting agents, flammable and non-flammable gases, combustible liquids, flammable liquids and solids, oxidizers, poisons, disease-causing agents, radioactive materials, corrosive materials, and other materials (including hazardous wastes).

Hazardous Material Incident (stationary)

Any uncontrolled release of material capable of posing a risk to health, safety, and property. Areas at risk include facilities that produce, process, or store hazardous materials as well as all sites that treat, store, and dispose of hazardous material.

Hazardous Material Incident (transportation)

Any spill during transport of material that is potentially a risk to health and safety

Hazard Mitigation

An cost effective measure that will reduce the potential for damage to a facility from a disaster event.

Hazard Mitigation Assistance Program

The program authorized under Section 404 of the Stafford Act that provides funding for hazard mitigation projects. These projects are cost-effective and complement existing post-disaster mitigation programs and activities by providing funding for beneficial mitigation measures that are not funded through other programs.

Hazard Mitigation Plan

The plan resulting from a systematic evaluation of the nature and extent of vulnerability to the effects of natural hazards present in society. It includes the actions needed to minimize future vulnerability to hazards.

Helibase

The main location for parking, fueling, maintaining, and loading helicopters operating in support of an incident. It is usually located at or near the incident base.

Helispot

Any designated location where a helicopter can safely take-off and land. Some helispots may be used for loading supplies, equipment, or personnel.

Hierarchy of Command

(See Chain of Command)

I**Incident**

An occurrence or event that requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Action Plan

The plan developed at the field response level which contains objectives reflecting the overall incident strategy, specific tactical actions, and supporting information for the next operational period. The plan may be oral or written.

Incident Base

Location at the incident where the primary logistics functions are coordinated and administered. (Incident name or other designator will be added to the term "Base"). The incident command post may be co-located with the base and there is only one base per incident.

Incident Commander

The individual responsible for the command of all functions at the field response level.

Incident Command Post (ICP)

The location at which the primary command functions are executed. The ICP may be co-located with the incident base or other incident facilities.

Incident Command System (ICS)

The nationally-used, standardized, on-scene emergency management concept. It is specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

Incident Communication Center

The location of the communications unit and the message center.

Incident Management Team

The Incident Commander and appropriate General and Command staff personnel assigned to an incident.

Incident Objectives

Statements of guidance and direction for the selection of appropriate strategy and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.

Individual Assistance (IA)

Supplementary federal assistance provided under the Stafford Act to individuals and families adversely affected by a major disaster or an emergency. Such assistance may be provided directly by the federal government, state or local governments, or disaster relief organizations.

Information Officer

A member of the command staff responsible for interfacing with the public and media or with other agencies requiring information directly from the incident. There is only one information officer per incident. The information officer may have assistants. This position is also referred to as public affairs or public information officer in some disciplines. At SEMS EOC and Field ICS levels, the information function may be established as a coordinator or as a section or branch reporting directly to the EOC director.

Initial Action

The actions taken by resources which are the first to arrive at an incident.

Initial Response

Resources initially committed to an incident.

Integrated Emergency Management System (IEMS)

A strategy for implementing emergency management activities. It builds upon those functions common to preparedness for any type of occurrence and provides for special requirements of individual emergency situations. IEMS goal is to provide function based plan annexes that can be adapted to varied hazard events.

Intermediate-Term Prediction

A prediction of an earthquake that is expected within a period of a few weeks to a few years.

J**Jurisdiction**

This is a range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be political/geographical (e.g., special district, city, county, state or federal boundary lines), or functional (e.g., police department, health department, etc.) (See Multi-Jurisdiction).

Jurisdictional Agency: The agency having jurisdiction and responsibility for a specific geographical area or a mandated function.

L**Landing Zone**

(See Helispot)

Leader

The SEMS/ICS title for an individual responsible for a functional unit, task forces, or teams.

Liaison Officer: A member of the command staff at the SEMS EOC and Field ICS level and responsible for coordinating with representatives from cooperating and assisting agencies. At SEMS EOC levels, the function may be done by a coordinator and/or within a section or branch reporting directly to the EOC Director.

Lifelines: A general term including all systems for storing, treating, and distributing fuel, communications, water, sewage, and electricity.

Life-Safety

Refers to the joint consideration of both the life and physical well-being of individuals.

Local Emergency

The duly proclaimed existence of disaster conditions or extreme peril to the safety of persons and property within the territorial limits of a city, county, or city and county. These conditions may be air pollution, fire, flood, storm, epidemic, riot, or earthquake or other conditions, (other than labor controversy). These conditions are or are likely to be beyond the control of the services, personnel, equipment, and facilities of that political subdivision and require the combined forces of political subdivisions.

Local Government

Means local agencies defined in Government Code 8680.2 and special districts as defined in California Code of Regulations, Title 19 Division 2, Chapter 5, NDAA, 2900(y).

Local Government Advisory Committee (LGAC)

Committees established by the director of OES to provide a forum for the exchange of information among the cities and counties of a mutual aid region. The LGAC may develop a consensus of action and policy among local emergency managers on issues, policies, and programs of concern to local governments. If necessary the LGAC may bring such concerns to the attention of OES executive management.

Logistics Section

One of the five primary functions found at all SEMS/ICS levels. The section is responsible for providing facilities, services, and materials for the incident or at an EOC.

Long-Term Earthquake Potential

No specific time frame. Can refer to decades, centuries, or millennia.

Long-Term Prediction

A prediction of an earthquake that is expected within a few years up to a few decades.

M**Major Disaster**

Any hurricane, tornado, storm, flood, high-water, wind-driven water, tidal wave, tsunami, earthquake, volcanic eruption, landslide, mudslide, snowstorm, drought, fire, explosion, or other catastrophe in any part of the United States. The event causes damage of sufficient severity and magnitude to warrant a presidential declaration and disaster assistance under the Federal Disaster Relief Act.

Management by Objectives

In SEMS EOC and ICS field levels, this is a top-down management activity which involves a three-step process to achieve the desired goal. The steps are establishing the objectives, selecting appropriate strategy(s) to achieve the objectives, and directing assignments associated with the selected strategy.

Marshaling Area

An area used for mobilizing and assembling personnel and resources prior to sending them directly to the disaster-affected area. Marshaling areas are utilized particularly for disasters outside of the continental United States.

Mass Care Facility

A location where temporary services are provided to disaster victims during an emergency. Services and assistance may include lodging, food, clothing, registration, welfare inquiry, first aid, and essential social programs.

Media

All means of providing information and instructions to the public including radio, television, and newspapers.

Medical Unit

Functional unit within the service branch of the logistics section at SEMS EOC and ICS Field levels responsible for the development of the Medical Emergency Plan and for providing emergency medical treatment.

Message Center

The Message Center is part of the incident or EOC communications center and is co-located or placed adjacent to it. It receives, records, and routes information to appropriate locations at an incident or within an EOC.

Mitigation

Pre-event planning and actions which aim to lessen the effects of a potential disaster. (See also Comprehensive Emergency Management)

Mobilization

The process and procedures used by all organizations (federal, state, and local) for activating, assembling, and transporting all resources that have been requested in response to or support of an incident.

Mobilization Center

An off-incident location at which emergency service personnel and equipment are temporarily located pending assignment to incidents, release, or re-assignment.

Medical Self-Help

The medical treatment provided for the sick and injured by citizens and emergency forces in the absence of professional care.

Multi-Agency Coordination

The functions and activities of representatives of involved agencies and/or jurisdictions making decisions regarding the prioritizing of incidents and the sharing and allocation of critical resources.

Multi-Agency Coordination System (MACS)

The combination of personnel, facilities, equipment, procedures, and communications integrated into a common system. When activated, MACS has the responsibility for coordination of assisting-agency resources and support in a multi-agency or multi-jurisdiction environment. A MAC Group functions within the MACS.

Multi-Agency Incident

An incident where one or more agencies assist a jurisdictional agency or agencies. The incident may be managed under a single or a unified command structure.

Multi-Jurisdiction Incident

An incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In SEMS/ICS these incidents will be managed under unified command.

Multi -Purpose Staging Area (MSA)

A predesignated location such as a county/district fairgrounds having large parking areas and shelter for equipment and operators. The location provides a base for coordinated, localized emergency operations. It may also be a rally point for mutual aid coming into an area, and a site for post-disaster population support and recovery.

Mutual Aid Agreement

Written agreement between agencies and/or jurisdictions in which they agree to assist one another by furnishing personnel and equipment upon request.

Mutual Aid Coordinator

An individual at local government, operational area, region, or state level that is responsible for requesting, obtaining, processing, and using mutual aid resources. Mutual aid coordinator duties will vary depending upon the mutual aid system.

Mutual Aid Staging Area

A temporary facility established within or adjacent to affected areas. It may be supported by mobile communications and personnel provided by field or headquarters staff from state agencies as well as personnel from local jurisdictions throughout the state.

N**National Emergency Training Center (NETC)**

This is a FEMA campus in Emmitsburg, Maryland. It is composed of the United States Fire Administration (USFA) and the Emergency Management Institute (EMI).

National Flood Insurance Program (NFIP)

A federal program created by an act of Congress in 1968. It makes flood insurance available in communities that enact satisfactory floodplain management regulations.

National Warning System

The federal portion of the civil defense warning system. It is used to disseminate warning and other emergency information from the warning centers (or regions) to warning points in each state.

National Weather Service Issuances

Outlook - for events possible to develop in the extended period(extended definition depends on the type of event)

Advisory - for events that are occurring or are forecast to develop in the short term (generally within the next 6 hours)

Watch - for the possibility of an event happening within the short term (generally refers to the next 6 to 12 hours)

Warning - the most serious issuance. For life threatening events occurring or forecast to develop within the short term (generally within the next 6 hours)

Statements (or Updates) - Issued as updates to the above products

Flash Flooding

Flash Flooding Warning - flash flooding is occurring or imminent

Urban and Small Stream Flood Advisory - flooding is occurring or is imminent, but not life threatening; nuisance flooding may be upgraded to a Flash Flood Warning if conditions worsen.

Flash Flood Watch - there is a good possibility of Flash Flooding, but it is neither occurring nor imminent (generally means the possibility exists within the next 24 hours)

Flash Flood Statement - updates to any of the above three issuances

Nuclear Incident (fixed facility)

Any nuclear power plant occurrence resulting in a potential or actual release of radioactive material in sufficient quantity to threaten the health and safety of nearby populations.

O**One Hundred -Year Flood**

The flood elevation that has a one-percent chance of being equaled or exceeded in any given year. It is also known as the base flood elevation.

Operational Period

The period of time scheduled for execution of a given set of operation actions as specified in the Incident or EOC Action Plan. Operational periods may be various lengths - usually not over 24 hours.

Operations Section

One of the five primary functions found at all SEMS/ICS levels. The section responsible for all tactical operations at the incident or the coordination of operational activities at an EOC. The Operations Section at the SEMS EOC and ICS field response level can include branches, divisions and/or groups, task forces, team, single resources, and staging areas. At the EOC levels, the Operations Section would contain branches or divisions as necessary for span of control considerations.

Out-of-Service Resources

Resources assigned to an incident, but unable to respond for mechanical, rest, or personnel reasons.

P**Plan**

As used by OES, a document which describes the broad, overall jurisdictional response to potential extraordinary emergencies or disasters.

Planning Meeting

Any meeting held as needed throughout the duration of an incident to select specific strategies and tactics for incident control operations and for service and support planning. On larger incidents, the planning meeting is a major part in the development of the Incident Action Plan. Planning meetings are also an essential activity at all SEMS EOC levels.

Planning Section

(Also referred to as Planning/Intelligence)

One of the five primary functions found at all SEMS/ICS levels. It is responsible for the collection, evaluation, and dissemination of information about an incident or emergency and for the preparation and documentation of Incident or EOC Action plans. The section also maintains information on the current and forecasted situation and the status of resources assigned to the incident. At both the SEMS EOC and ICS field response level, the section will include the situation, resource, documentation, and demobilization units, as well as technical specialists. Other units may be added at the EOC level.

Planning Zone

A subdivision of a county that may consist of a city and its sphere of influence in adjacent unincorporated areas; a portion of the unincorporated area of a county, a military installation, or a state facility such as a correctional institution. Zoning simplifies the process of collecting and compiling data according to geographical location.

Political Subdivision

This includes any city, city and county, county, district, or other local governmental agency or public agency authorized by law.

Procurement Unit

A functional unit within the finance section and responsible for financial matters involving vendor contracts.

Public Assistance (PA)

Supplementary federal assistance provided under the Stafford Act to state and local governments or certain private, non-profit organizations. It does not include assistance for the direct benefit of individuals and families.

Public Information Officer

The individual at field or EOC level that has been delegated authority to prepare public information releases and to interact with the media. Duties will vary depending upon the agency and SEMS/ICS level.

R**Radio Amateur Civil Emergency Services (RACES)**

An emergency services organization designed to make efficient use of skilled radio amateurs throughout the state in accordance with approved civil defense communications plans. Operators are registered with a OES agency to provide emergency communications support.

Radiological Protection

The organized effort using warning, detection, preventive, and remedial measures to minimize the effect of nuclear radiation on people and resources.

Radiological Officer (RO)

An emergency management staff individual who is responsible for radiological protection operations. The RO is the principal advisor to the director/coordinator and other officials on matters pertaining to radiological protection operations.

Radiological Monitor

An individual trained to measure, record, and report radiation exposure and exposure rates, provide limited field guidance on radiation hazards associated with operations, and perform operator's checks and maintenance on radiological instruments.

Reception Area

A pre-designated to receive and care for persons displaced from a hazard area.

Recorders

Individuals within ICS or EOC organizational units who are responsible for recording information. Recorders may be found in Planning, Logistics, and Finance/Administration units.

Recovery

Activities traditionally associated with providing federal supplemental disaster recovery assistance under a presidential disaster declaration. These activities usually begin within days after the event and continue after the response activities cease. Recovery includes individual and public assistance programs which provide temporary housing assistance as well as grants and loans to eligible individuals and government entities.

Regional Director (RD)

A director of a regional office of FEMA or his/her designated representative. A regional director may be the disaster recovery manager appointed to exercise the authority of the regional director for a particular emergency or major disaster.

Relocates

These are individuals who are relocated from a hazard area to a low risk area.

Remedial Movement

The post-attack or post-event movement of people to better protected facilities or less hazardous areas.

Remedial Operations

These actions are taken to offset or alleviate its effects after the onset of an emergency situation.

Reporting Locations

These are specific locations or facilities where in-coming resources check-in. (See Check-in)

Rescue Group

Two or more rescue teams responding as a unified group under supervision of a designated group leader.

Rescue Team

Four or more personnel organized to work as a unit. One member is designated team leader.

Resources

Personnel and equipment available or potentially available for assignment to incidents or to EOCs. Resources are described by kind and type, and may be used in tactical support or supervisory capacities at an incident or EOC.

Resources Unit

This is a functional unit within the planning section at the SEMS EOC and ICS field response level. It is responsible for recording the status of resources committed to the incident. The unit also evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.

Response

Activities to address the immediate and short-term effects of an emergency or disaster. Response includes immediate actions to save lives, protect property, and meet basic human needs. Based on the requirements of the situation, response assistance will be provided to an affected state under the Federal Response Plan.

S**Safety Officer**

A member of the command staff at the incident or within an EOC and responsible for monitoring and assessing safety hazards or unsafe situations and developing measures for ensuring personnel safety. The Safety Officer may have assistants.

Search

Systematic investigation of an area or premises to determine the presence and/or location of persons entrapped, injured, immobilized, or missing.

Search Dog Team

A skilled dog handler with one or more dogs trained for finding persons trapped in a manner that precludes detection by sight or sound. Search dogs are usually owned by their handler.

Section

That organization level with responsibility for a major functional area of the incident or at an EOC (e.g., Command or Management, Operations, Planning, Logistics, Finance).

Section Chief

The SEMS/ICS title for individuals responsible for command of functional sections such as operations, planning, logistics and finance.

Self-Help

A concept describing self-reliance and self-sufficiency within an adverse environment having limited external assistance.

Sensitive Facilities

Facilities in reception areas that will not normally be used as lodging facilities for relocatees. The facilities are either considered unsuitable or are required for essential activities: food establishments, fire stations, banks, radio stations, etc. However, if any of these facilities provide adequate protection against radioactive fallout, they may be used as a fallout shelter.

Service

An organization assigned to perform a specific function during an emergency. It may be one department or agency, if only that organization is assigned to perform the function or it may be two or more independent organizations combined to increase operational control and efficiency.

Service Branch

A branch within the logistics section and responsible for service activities at the incident. This may include the communications, medical, and food units.

Shelter Complex

A geographic grouping of facilities used as a fallout shelter when such an arrangement serves planning, administrative, and/or operation purposes. Normally, a complex will include a maximum of 25 individual shelter facilities within a radius of about .5 miles.

Shelter Manager

An individual who provides for the internal organization, administration, and operation of a shelter facility.

Short-Term Prediction

A prediction of an earthquake that is expected within a few hours to a few weeks. The short-term-prediction can be further described as follows: *Alert* - three days to a few weeks; *Imminent Alert* - now to three days.

Single Resource: An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

Situation Unit

Functional unit within the planning section and responsible for the collection, organization, and analysis of incident status information, as well as analysis of the situation as it progresses. This unit reports to the planning section chief.

Span of Control

The supervisory ratio maintained within an SEMS EOC or ICS field organization. A span of control of five-positions reporting to one supervisor is considered optimum.

Special District

A unit of local government (other than a city, county, or city and county) with authority or responsibility to own, operate or maintain a project for purposes of natural disaster assistance. This may include a joint powers authority.

Stafford Act

Robert T. Stafford Disaster Relief and Emergency Assistance Act, PL 100-707, signed into law November 23, 1988; amended the Disaster Relief Act of 1974, PL 93-288.

Staging Areas

These are locations set up at an incident where resources can be placed while awaiting a tactical assignment. Staging areas are managed by the operations section.

Staging Area Managers

Individuals within SEMS/ICS organizational units that are assigned special managerial responsibilities at staging areas. (Also Camp Manager)

Standard Operating Procedures (SOPs)

A set of instructions having the force of a directive and covering those features of operations which lend themselves to a definite or standardized procedure. Standard operating procedures support an annex by indicating in detail the process for performing a particular task.

Standardized Emergency Management System (SEMS)

A system established in California for managing response to multi-agency and multi-jurisdiction emergencies at the jurisdiction level. SEMS is similar in organization to the Incident Command System (ICS) and is composed of five basic sections: management, operations, planning, logistics, and finance.

State Agency

Any department, division, independent establishment, or agency of executive branch of a state government.

State Coordinating Officer (SCO)

The person appointed by the governor to act for the state in cooperation with the Federal Coordinating Officer.

State Emergency Organization

The agencies, board, and commissions of the executive branch of state government and affiliated private sector organizations.

State Emergency Plan

The State of California Emergency Plan as approved by the governor.

State of Emergency

The duly proclaimed existence of conditions of disaster or extreme peril to the safety of persons and property within the state and caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, earthquake, or other conditions (not including a labor controversy). It may also include conditions causing a *state of war emergency*. These conditions by reason of magnitude, are likely to be beyond the control of the services, personnel, equipment, and facilities of any single city, county, or city and county, and require the combined forces of a mutual aid region or regions.

State of War Emergency

The condition which exists immediately, with or without a proclamation thereof by the governor, whenever the state or nation is directly attacked by an enemy of the United States. It may exist upon the receipt of a warning from the federal government that such an enemy attack is probable or imminent.

Stay-Put

A resident in a hazardous or potentially hazardous area who refuses to relocate during a directed relocation or who is too ill or infirm to be evacuated.

Strategy

The general plan or direction selected to accomplish incident or EOC objectives.

Supply Unit

A functional unit within the support branch of the logistics section and responsible for ordering equipment and supplies for incident operations.

Support Branch

A branch within the logistics section and responsible for providing personnel, equipment, and supplies to support incident operations. This branch includes the supply, facilities, and ground support units.

Support Resources

These are non-tactical resources under the supervision of the logistics, planning, and finance sections or the command staff.

Supporting Materials

Refers to the several exhibits that may be included within an Incident Action Plan (e.g., communications plan, map, safety plan, traffic plan, and medical plan).

T**Tactical Direction**

This is guidance given by the operations section chief at the SEMS EOC or ICS Field level and includes the tactics appropriate for the selected strategy, the selection and assignment of resources, tactics implementation, and performance monitoring for each operational period.

Task Force

A combination of single resources assembled for a particular tactical need with common communications and a leaders.

Team

(See Single Resource)

Technical Specialists

These are specially skilled personnel who can be used anywhere within the SEMS EOC or ICS field level organizations.

Technological Hazard

These hazards emanate from the manufacture, transportation, and use of such substances as radioactive materials, chemicals, explosives, flammables, agricultural pesticides, herbicides, and disease agents. These hazards also include oil spills on land, coastal waters or inland water systems and debris from space.

Time Unit

This is a functional unit within the finance section and responsible for recording time for incident or EOC personnel and hired equipment.

Tort

This is an act that harms another. It occurs when a person commits an act without the right and harms another person as a result.

Traffic Control Points (TCP)

There are places along movement routes that are manned by emergency personnel to direct and control the flow of traffic.

Triage

This is a process for priority sorting of sick and injured people on the basis of urgency and type of condition presented. It improves routing to appropriate medical facilities.

Type

This refers to resource capability. A Type 1 resource provides a greater overall capability due to power, size, capacity, etc., than would be found in a Type 2 resource. Resource typing provides managers with additional information to help select the best resource for the task.

U**Unified Area Command**

A Unified Area Command is established when incidents under an area command are multi-jurisdictional. (area command and unified command)

Unified Command

In SEMS/ICS, unified command is a team effort which allows all agencies with responsibility for the incident (either geographical or functional) to manage by establishing a common set of objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility, or accountability.

Unit

This is an organizational element having functional responsibility. Units are commonly used in the planning, logistics, or finance sections and can be used in operations for some applications. Units are also found in EOC organizations.

Unity of Command

The concept where each person within an organization reports to only one designated person.

Urban Fire

This defines any instance of uncontrolled burning which results in structural damage to residential, commercial, industrial, institutional or other properties in developed areas.

Urban Rescue

This is the complex process in which trained personnel use specialized equipment to locate and extricate victims trapped in collapsed buildings. It also the mobilization and management of such personnel and equipment.

V**Volunteers**

These are individuals who make themselves available for assignment during an emergency. These people may or may not have particular skills needed during emergencies or be part of a previously organized group.

W**Weather Warning Levels**

Provided by the National Weather Service to advise public and government agencies of threats due to severe weather. The three levels are *Alert*, *Watch* and *Warning*.

Wildfire

This is any instance of uncontrolled burning in grasslands, brush, or woodlands.

Winter Storm (Severe)

This includes ice storms, blizzards, and extreme cold. The National Weather service characterizes blizzards as combinations of winds in excess of 35 mph with considerable falling or blowing snow, frequently reducing visibility to 0.25 miles or less.

APPENDIX B**LIST OF ACRONYMS AND ABBREVIATIONS**

A&E	Architecture and Engineering
AC	Area Command
ADA	Americans with Disabilities Act
AQMD	Air Quality Management District
ARC	American Red Cross
ASCS	U.S. Agricultural Stabilization and Conservation Services
ARES	Amateur Radio Emergency Services
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
BPA	Blanket Purchasing Agreements
C of S	Chief of Staff
CAA	Clean Air Act
CAN	Community Alert Network
CAO	Chief Administrative Office(r)
CAT	Crisis Action Team
CAV	Community Assistance Visit
CCA	Comprehensive Cooperative Agreement
CCP	Casualty Collection Points
CD	Civil Defense
CDBG	Community Development Block Grant
CDC	Centers for Disease Control, U.S. Public Health Service
CDL	Community Disaster Loan
CDRG	Catastrophic Disaster Response Group
CEM	Comprehensive Emergency Management
CEO	Chief Executive Officer
CEP	Comprehensive Emergency Planning
CEPPO	Chemical Emergency Preparedness and Prevention Office
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
COE	Corps of Engineers (US Army)
COG	Continuity of Government
CPG	Civil Preparedness Guide
CPI	Consumer Price Index
CWA	Clean Water Act
DA	Damage Assessment
DAC	Disaster Application Center
DAE	Disaster Assistance Employee
DAP	Disaster Assistance Programs
DCS	Disaster Communications Service
DEM	Division of Emergency Management (Nevada)
DFCO	Deputy Federal Coordinating Officer

DFO	Disaster Field Office
DHA	Disaster Housing Assistance
DHHS	Department of Health and Human Services
DLS	Disaster Legal Services
DMIS	Disaster Management Information System
DOB	Duplication of Benefits
DOC	Department Operations Center
DOD	Department of Defense
DOE	Department of Energy
DOL	Department of Labor
DOT	Department of Transportation
DP	Disaster Preparedness
DPIG	Disaster Preparedness Improvement Grant
DRM	Disaster Recovery Manager
DRO	Disaster Recovery Operations
DSA	Disaster Support Area
DSA	Division of the State Architect (California)
DSR	Damage Survey Report
DUA	Disaster Unemployment Assistance
DWI	Disaster Welfare Inquiry
EAS	Emergency Alert System
EBS	Emergency Broadcast System
ED	United States Department of Education
EDD	Employment Development Department
EDIS	Emergency Digital Information System
EEIs	Essential Elements of Information
EEO	Equal Employment Opportunity
EIR	Environmental Impact Review
EMA	Emergency Management Assistance
EMI	Emergency Management Institute
EMMA	Emergency Managers Mutual Aid
EMP	Electromagnetic Pulse
EMSA	Emergency Medical Services Authority
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
ENN	Emergency News Network
EOC	Emergency Operations Center
EOP	Emergency Operating Procedures
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
EPI	Emergency Public Information
EPIC	Emergency Public Information Center
ER	Emergency Relief Program
ERT	Emergency Response Team
ESA	Endangered Species Act
ESC	Earthquake Service Center
ESC	Emergency Services Coordinator

ESF	Emergency Support Functions
EST	Emergency Support Team
FA	Fire Administration (office symbol)
FAA	Federal Aviation Administration
FAS	Federal Aid System Road
FAST	Federal Agency Support Team
FAX	Facsimile
FBI	Federal Bureau of Investigation
FCC	Federal Communications Commission
FCO	Federal Coordinating Officer
FEMA	Federal Emergency Management Agency
FFY	Federal Fiscal Year
FHWA	Federal Highway Administration
FIA	Federal Insurance Administration
FIPS Number	Same as Project Application Number
FIRESCOPE	Firefighting Resources of Calif. Organized for Potential Emergencies
FMHA	Farmers Home Administration
FONSI	Finding of No Significant Number
FPM	Flood Plain Management
FRERP	Federal Radiological Emergency Response Plan
GAR	Governor's Authorized Representative
GIS	Geographic Information System
GSA	General Services Administration
HAZ MIT	Hazard Mitigation (Safety measures taken in advance to lessen future damage)
HAZMAT	Hazardous Materials
HEW	U.S. Department of Health, Education and Welfare
HM	Hazard Mitigation
HMC	Hazard Mitigation Coordinator
HMDA	Hazard Mitigation and Disaster Assistance
HMGP	Hazard Mitigation Grant Program
HMO	Hazard Mitigation Officer
HMT	Hazard Mitigation Team
HUD	Housing and Urban Development Program
IA	Individual Assistance
IA/O	Individual Assistance/Officer
IC	Incident Commander
ICC	Interstate Commerce Commission
ICP	Incident Command Post
ICS	Incident Command System
IFGP	Individual and Family Grant Program
IG	Inspector General
IMA	Individual Mobilization Augmentee
IRS	U.S. Internal Revenue Service

IRMS	Information Resources Management Service
JIC	Joint Information Center
JDIC	Justice Data Interface Controller
JPA	Joint Powers Agreement
JPIC	Joint Public Information Center
JIS	Joint Information System
LCO	Local Coordinating Officer
LGAC	Local Government Advisory Committee
LEPC	Local Emergency Planning Committee
MACS	Multi-Agency Coordination System
MARAC	Mutual Aid Regional Advisory Committee
MARS	U.S. Army Military Affiliate Radio System
MASF	Mobile Aeromedical Staging Facility
MC	Mobilization Center
MCR	Military Communications Representative
MHFP	Multi-hazard Functional Planning
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MRA	Mortgage and Rental Assistance Program
MRE	Meals Ready to Eat
MSA	Multi-Purpose Staging Area
MTA	Metropolitan Transit Authority
NAWAS	National Warning System
NCCEM	National Coordinating Council on Emergency Management
NCS	National Communications System
NCSP	National Communications Support System
NCSRMR	National Communications System Regional Manager
NDEA	National Defense Education Act
NDMS	National Disaster Medical System
NECC	National Emergency Coordination Center (FEMA)
NEIS	National Earthquake Information Service
NEST	Nuclear Emergency Search Team
NETC	National Emergency Training Center
NFA	National Fire Academy
NFDA	National Funeral Directors Association
NFIP	National Flood Insurance Program
NHC	National Hurricane Center
NHPA	National Historic Preservation Act
NIFCC	National Interagency Fire Coordination Center, U.S. Forest Service
NOAA	National Oceanic and Atmospheric Administration
NOI	Notice of Interest
NRC	Nuclear Regulatory Commission
NRT	National Response Team

NTC	National Teleregistration Center
NVOAD	National Voluntary Organizations Active in Disaster
NWS	National Weather Service
OFA	Other Federal Agencies
OMB	Office of Management and Budget (Federal)
OPA	Oil Pollution Act
OPM	Office of Personnel Management
OSC	On-Scene Coordinator
OSHA	Occupational Safety and Health Administration
OSTP	Office of Science Technology Policy
PA	Public Affairs
PAO	Public Affairs Officer
PA	Public Assistance
PA/O	Public Assistance Officer
PA#	Project Application Number
PBX	Private Branch Exchange
PDA	Preliminary Damage Assessment
PDH	Packaged Disaster Hospital
PDS	Professional Development Series
PFT	Permanent Full-Time Employee
PIO	Public Information Officer
PL	Public Law - U.S. Public Law 93-288, Federal Disaster Relief Act of 1974
PNP	Private Non-profit Organization
PSI	Pounds per Square Inch
PSR	Personal Service Radio
RACES	Radio Amateur Civil Emergency Services
RADEF	Radiological Defense
RCP	Regional Oil and Hazardous Substances Pollution Contingency Plan
RD	Regional Director (FEMA)
REACT	Radio Emergency Associated Communication Team
REC	Regional Emergency Coordinator
REOC	Regional Emergency Operations Center
RM	Radiological Monitor
RO	Radiological Officer
RRT	Regional Response Team
RTOS	Rail Transit Operations Supervisor
SA	Salvation Army
SAP	State Assistance Program
SAR	Search and Rescue
SARA	Superfund Amendment Re-authorization Act (Title III)
SAST	California State Agency Support Team
SBA	Small Business Administration
SCO	State Coordinating Officer
SEMS	Standardized Emergency Management System

SF	Standard Form
SHMC	State Hazard Mitigation Officer
SHMO	State Hazard Mitigation Officer
SHPO	State Historic Preservation Officer
SITREP	Situation Report
SLPS	State and Local Programs and Support Directorate (FEMA)
SOC	State Operations Center
SOP	Standard Operating Procedure
STO	State Training Officer
Subgrantee	An eligible applicant in Federally declared disasters
TH	Temporary Housing
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USAR	Urban Search and Rescue
USDA	U.S. Department of Agriculture
USFA	United States Fire Administration
USGS	United States Geological Survey
VA	Veterans Administration
VSAT	Very Small Aperture Terminal
VOAD	Volunteer Organizations Active in Disaster

APPENDIX C
LEGAL DOCUMENTS

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