PART ONE

BASIC PLAN CONTENTS

SECTION ONE

BASIC PLAN

PURPOSE

The Basic Plan addresses the City's planned response to natural and technological disasters. It provides an overview of operational concepts, identifies components of the City's emergency/disaster management organization within the Standardized Emergency Management System (SEMS), and describes the overall responsibilities of the federal, state and county entities and the City for protecting life and property and assuring the overall well-being of the population.

AUTHORITIES AND REFERENCES

Disaster response and recovery operations will be conducted as outlined in Concept of Operations, and in accordance with the enabling legislation, plans, and agreements listed in **Part One, Section Two-Authorities and References**.

PREPAREDNESS ELEMENTS

The City will place emphasis on: emergency/disaster planning; training of full time, auxiliary and reserve personnel; public awareness and education; and assuring the adequacy and availability of sufficient resources to cope with emergencies/disasters. Emphasis will also be placed on mitigation measures to reduce losses from disasters, including the development and enforcement of appropriate land use, design and construction regulations.

CONCEPT OF OPERATIONS

Operations during peacetime and national security emergencies involve a full spectrum of activities from a minor incident, to a major earthquake, to a nuclear detonation. There are a number of similarities in operational concepts for peacetime and national security emergencies. Some emergencies/disasters will be preceded by a build-up or warning period, providing sufficient time to warn the population 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 emergency/disaster operations plan and commitment of resources. All agencies must be prepared to respond promptly and effectively to any foreseeable emergency/disaster, including the provision and utilization of mutual aid (see **Part One, Section Three-Mutual Aid).**

Emergency/disaster management activities during peacetime and national security emergencies are often associated with the four emergency management phases indicated below. However, not every disaster necessarily includes all indicated phases.

Preparedness Phase

The preparedness phase involves activities taken in advance of an emergency/disaster.

These activities develop operational capabilities and effective responses to a disaster. These actions might include mitigation activities, emergency/disaster planning, training and exercises and public education. Those identified in this plan as having either a primary or support mission relative to response and recovery should prepare Standard Operating Procedures (SOPs)/Emergency Operating Procedures (EOPs) and checklists detailing personnel assignments, policies, notification rosters, and resource lists. Personnel should be acquainted with these SOPs/EOPs and checklists through periodic training in the activation and execution procedures.

Increased Readiness

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

- Review and update of emergency/disaster plans, SOPs/EOPs, and resources listings.
- Dissemination of accurate and timely public information.
- Accelerated training of permanent and auxiliary staff.
- Inspection of critical facilities.
- Recruitment of additional staff and Disaster Services Workers.
- Mobilization of resources
- Testing warning and communications systems.

Response Phase

Pre-Emergency/Disaster

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

- Evacuation of threatened populations to safe areas.
- Advising threatened populations of the emergency/disaster and apprising them of safety measures to be implemented.
- Advising the Los Angeles County Operational Area of the emergency/disaster.
- Identifying the need for mutual aid and requesting such through the appropriate channels.
- Proclamation of a Local Emergency by local authorities.

Emergency/disaster 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 within the affected area by local government agencies and segments of the private sector.

One of the following conditions will apply to the City during this phase:

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

The emergency/disaster management organization will give priority to the following operations:

- Dissemination of accurate and timely information and warning to the public.
- Situation analysis.
- Resource allocation and control.
- Evacuation and rescue operations.
- Medical care operations.
- Coroner operations.
- Care and shelter operations.
- Access and perimeter control.
- Public health operations.
- Restoration of vital services and utilities.

When local resources are committed or anticipated to be to the maximum and additional resources are required, requests for mutual aid will be initiated through the Los Angeles County Operational Area. Fire and law enforcement agencies will request or render mutual aid directly through established channels. Any action which involves financial outlay by the jurisdiction, or a request for military assistance, must be authorized by the appropriate local official.

Depending on the severity of the emergency/disaster, a Local Emergency may be proclaimed, the local Emergency Operating Center (EOC) may be activated, and Los Angeles County Operational Area will be advised. The State OES Director may request a gubernatorial proclamation of a State of Emergency. Should a 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 State OES Regions, state agencies and other entities in the affected areas and to ensure the effectiveness of the state's SEMS. The State Regional EOC (REOC) in Los Alamitos, or an alternate location, will support the Los Angeles County Operational Area.

If the Governor requests and receives a Presidential declaration of an Emergency or a Major Disaster under Public Law 93-288, he will appoint a State Coordinating Officer (SCO). The SCO and an appointed Federal Coordinating

Officer (FCO) will coordinate and control state and federal recovery efforts in supporting local operations. All state and federal emergency/disaster response efforts and initial recovery support will be coordinated by the REOC.

Sustained Emergency/disaster
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 Director, operating through the SCO, 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. Disaster Assistance Centers (DACs), Local Assistance Centers (LACs) or telephonic centers may also be established, providing a "one-stop" service to initiate the process of receiving federal, state and local recovery assistance.

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

- Reinstatement of family autonomy.
- Provision of essential public services.
- Permanent restoration of private and public property.
- Identification of residual hazards.
- Plans to mitigate future hazards.
- Recovery of costs associated with response and recovery efforts.

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 which exist within the City and are a threat to life and property are part of the mitigation efforts. Mitigation tools include:

- Local ordinances and statutes (zoning ordinance, building codes and enforcement, etc.).
- Structural measures.
- Tax levee or abatements.
- Public information and community relations.
- Land use planning.
- Professional training.

HAZARD IDENTIFICATION AND ANALYSIS

A hazard analysis has indicated that the City may be at risk to certain types of emergencies/disasters and to national security emergencies. (For further information see the City's Hazard Mitigation Plan, 2004 and the City of Pasadena Safety Element,

2002). These hazards are identified in **Part One, Section Four -Threat Assessments**, which also provide general and specific information on their possible impact on the jurisdiction.

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

In an emergency/disaster, governmental response is an extraordinary extension of responsibility and action, coupled with normal day-to-day activity. Normal governmental duties may be maintained, with emergency/disaster operations carried out by those agencies assigned specific emergency/disaster functions. The Standardized Emergency Management System (SEMS) has been adopted by the City of Pasadena for managing response to multi-agency and multi-jurisdiction emergencies and to facilitate communications and coordination between all levels of the system and among all responding agencies. Chapter 1 of Division 2 of Title 19 of the California Code of Regulations establishes the standard response structure and basic protocols to be used in emergency/disaster response and recovery.

Fully activated, the SEMS consists of five levels: field response, local government, operational areas (countywide), OES Mutual Aid Regions, and state government.

At the national level, Homeland Security Presidential Directive-5, *Management of Domestic Incidents*, established the National Incident Management System (NIMS) as the required emergency/disaster response system. This system provides a consistent nationwide approach for Federal, State, local and tribal governments to work effectively and efficiently together to prepare for, prevent, respond to and recover from domestic incidents, regardless of cause, size or complexity. NIMS is based on many of the SEMS fundamentals. Agencies using SEMS have very minor adjustments incorporating NIMS into their plans, training and exercises. In the middle of 2006, the State of California Office of Emergency Services issued guidance on how to incorporate NIMS into existing SEMS programs. The city of Pasadena is currently following this state guidance in its executing of planning, training and exercise activities to ensure NIMS compliance.

Field Response Level

The field response level is where emergency response personnel and resources, under the command of an appropriate authority, carry out tactical decisions and activities in direct response to an incident or threat. SEMS regulations require the use of the Incident Command System (ICS) at the field response level of an incident. The ICS field functions to be used for emergency/disaster management are: command, operations, planning/intelligence, logistics, and finance/administration.

Local Government Level

Local governments include cities, counties, and special districts. Local governments manage and coordinate the overall emergency/disaster response and recovery activities within their jurisdiction. Local governments are required to use SEMS when their emergency operations center is activated or a local emergency is proclaimed in order to be eligible for state funding of response-related personnel costs. Local governmental

levels shall provide the following functions: management, operations, planning/intelligence, logistics, and finance/administration. Local jurisdictions are responsible for overall direction of personnel and equipment provided for emergency/disaster operations through mutual aid (Government Code Section 8618). Additional details relative to the organization and responsibilities of the SEMS elements at each of the levels are provided in **Part Two, Management Section.**

Operational Area

Under SEMS, the operational area is defined in the Emergency Services Act as an intermediate level of the state's emergency services organization consisting of a county and all political subdivisions within the county area. Political subdivisions include cities, a city and county, counties, district or other local governmental agency, or public agency as authorized by law. The operational area is responsible for:

- Coordinating information, resources and priorities among local governments within the operational area,
- Coordinating information, resources and priorities between the regional level and the local government level, and
- Using multi-agency or inter-agency coordination to facilitate decisions for overall operational area level emergency response activities.

The County of Los Angeles Office of Emergency Management is the lead agency for the Los Angeles County Operational Area which includes the City of Pasadena.

Activation of the Operational Area EOC during a State of Emergency or a Local Emergency is required by SEMS regulations under the following conditions:

1) A local government within the operational area has activated its EOC and requested activation of the operational area EOC to support their emergency operations.
2) Two or more cities within the operational area have proclaimed a local emergency.
3) The county and one or more cities have proclaimed a local emergency.
4) A city, city and county, or county has requested a governor's proclamation of a state of emergency, as defined in the Government Code Section 8558(b).
5) A state of emergency is proclaimed by the governor for the county or two or more cities within the operational area.
6) The operational area is requesting resources from outside its boundaries. This does not include resources used in normal day-to-day operations which are obtained through existing mutual aid agreements.
7) The operational area has received resource requests from outside its boundaries. This does not include resources used in normal day-to-day operations which are obtained through existing mutual aid agreements.

If the Los Angeles County Operational Area is activated, the Sheriff of Los Angeles County will be the Director of Emergency Operations (Operational Area Coordinator) for Los Angeles County Operational Area and will have the overall responsibility for

coordinating and supporting emergency/disaster operations within the county. The Operational Area Coordinator and supporting staff will constitute the Operational Area Emergency Management Staff. The Los Angeles County EOC will fulfill the role of the Operational Area EOC.

Regional

Because of its size and geography, the state has been divided into six mutual aid regions. The purpose of a mutual aid region is to provide for the more effective application and coordination of mutual aid and other emergency/disaster related activities.

State OES has also established three Administrative Regions (Coastal, Inland and Southern). These Administrative Regions are the means by which State OES maintains day-to-day contact with emergency services organizations at local, county and private sector organizations.

In SEMS, the regional level manages and coordinates information and resources among operational areas within the mutual aid region and also between the operational areas and the state level. The regional level also coordinates overall state agency support for emergency/disaster response activities within the region.

State

The state level of SEMS manages state resources in response to the emergency/disaster needs of the other levels and coordinates mutual aid among the mutual aid regions and between the regional level and state level. The state level also serves as the coordination and communication link between the state and the federal disaster response system.

FEDERAL EMERGENCY MANAGEMENT

The Federal Emergency Management Agency (FEMA) serves as the main federal government contact during emergencies, major disasters and national security emergencies.

CONTINUITY OF GOVERNMENT

A major disaster or national security emergency could result in the death or injury of key government officials and/or the partial or complete destruction of established seats of government, and public and private records essential to continued operations of government. Government at all levels is responsible for providing continuity of effective leadership, authority and adequate direction of emergency and recovery operations. The California Government Code Section 8643(b) and the Constitution of California provide the authority for state and local government to reconstitute itself in the event incumbents are unable to serve. **Part Two, Management Section** provides complete details on the Continuity of Government Program in California.

PUBLIC AWARENESS AND EDUCATION

The public's response to any emergency/disaster is based on an understanding of the nature of the emergency/disaster, 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.

Public awareness and education prior to any emergency/disaster are crucial to successful public information efforts during and after the emergency/disaster. 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, state and federal officials to ensure their contribution to emergency preparedness and response operations. Emergency Public Information procedures are addressed in **Part Two, Management Section.**

TRAINING AND EXERCISES

Training and exercises are essential at all levels of government to make emergency operations personnel operationally ready. All emergency/disaster plans should include provision for training.

The objective is to train and educate public officials, emergency/disaster response personnel and the public. The best method for training staff to manage emergency/disaster operations is through exercises.

Exercises are conducted on a regular basis to maintain the readiness of operational procedures. Exercises provide personnel with an opportunity to become thoroughly familiar with the procedures, facilities and systems which will actually be used in emergency/disaster situations. There are several forms of exercises: Table Top, Functional, and Full Scale.

ALERTING AND WARNING

Warning is the process of alerting governmental forces and the general public to the threat of imminent extraordinary danger. Dependent upon the nature of the threat and the population group at risk, warning can originate at 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. Pasadena will utilize various modes of alerting and warning the community. The following information describes the various systems and provides an explanation of the "Emergency Conditions and Warning Actions" through which these systems may be accessed.

FEDERAL ALERTING AND WARNING SYSTEMS

EAS Emergency Alert System The Emergency Alert System (EAS) is designed for the broadcast media to disseminate emergency public information. This system

enables the President, and 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 within the rules and regulations of the Federal Communications Commission (FCC). FCC rules and regulations require all participating stations with 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 through the state using the state's CLERS VHF/UHF radio relay stations.

The FCC has established committees of broadcast industry personnel at each governmental level to develop EAS plans. These include:

- Federal — The EAS Advisory Committee
- State — State Emergency Communications Co
- Local — Operational Area Emergency Communications Committee

NAWAS National Warning System

NAWAS is a dedicated wire-line system that provides two-way voice communications between federal warning center, state warning points and local warning points. If the situation ever presents itself, NAWAS is a nationwide system developed to send warnings of impending attack throughout the nation. The system may be activated from two federal facilities that are staffed 24 hours daily: the National Warning Center (North American Air Defense Command, Colorado Springs) and the Alternate National Warning Center (Olney, Maryland).

During major peacetime emergencies, state agencies may use portions of NAWAS augmented by state and local systems. Each state has a warning point that controls the NAWAS connection within the state. See State Level CALWAS for more information.

Tests
NAWAS is tested three times daily at unscheduled times. The state warning point, OES, acknowledges the test for California. If OES does not respond, the alternate, CHP, will acknowledge the test. Immediately following the national test, the state NAWAS test is conducted.

NWS National Weather Service

The National Weather Service transmits continuous weather information on 162.40, 162.475, and 162.55 MHZ frequencies. Weather Service severe weather broadcasts are preceded with a 1,050 MHZ tone that activates weather monitor receivers equipped with decoders. The Weather Service can also access NAWAS to announce severe weather information.

STATE ALERTING AND WARNING SYSTEMS

CALWAS California Warning System

CALWAS is the state portion of NAWAS that extends to communications and dispatch centers throughout the state. The State Office of Emergency Services headquarters ties into the federal system through the Warning Center in Sacramento. Circuits then extend to county warning points. The California Highway Patrol headquarters in Sacramento is the state's alternate warning point. Both state and federal circuits are monitored 24 hours a day at the Warning Center, the alternate point and each of the local warning points. Counties not on this system will receive warning through other means (normally over the California Law Enforcement Telecommunications System [CLETS]).

Immediately following the NAWAS test through the Warning Center, the state conducts the CALWAS test. On alternate Wednesdays, the alternate state warning point, CHP, conducts a test at 10:00 a.m. local time.

Backup systems for CALWAS includes:

- CESFRS California Emergency Services Fire Radio System
- CESRS California Emergency Services Radio System
- CLEMARS California Law Enforcement Mutual Aid Radio System
- CLERS California Law Enforcement Radio System
- CLETS California Law Enforcement Telecommunications System

CESFRS California Emergency Services Fire Radio System

CESFRS is the statewide communications network, available to all fire agencies. The three available channels have been designated Fire White #1, #2 and #3. White #1 is authorized for base station and mobile operations. White #2 and White #3 are for mobile and portable use only. All three white channels are designated by the Federal Communications Commission as “Intersystem” channels and are intended solely for

inter-agency fire operations, i.e. mutual aid. White #2 and White #3 are intended for on-scene use only.

CESRS California Emergency Services Radio System

CESRS serves as an emergency communications system for OES and county emergency services organizations. The system assists in the dissemination of warning information and to support disaster and emergency operations. The system may be used on a day-to-day basis for administrative emergency services business. Statewide communications are provided through a number of microwave interconnected mountain top relays. It operates under appropriate FCC rules and regulations and is administered by the State of California through the Office of Emergency Services.

CLEMARS California Law Enforcement Mutual Aid Radio System

CLEMARS was established to provide common police radio frequencies for use statewide by state and local law enforcement agencies during periods of man-made or natural disasters or other emergencies where inter-agency coordination is required. It operates under appropriate FCC rules and regulations and is administered by the State of California through the Office of Emergency Services.

Participation in CLEMARS is open to all California Law Enforcement agencies which are eligible to operate on radio frequencies authorized by the FCC for the Police Radio Service. In addition, the agency's political subdivision must be a signatory to the California Disaster and Civil Defense Master Mutual Aid Agreement and have developed a mutual aid response capability with trained personnel who will respond when requested by their operational area or regional mutual aid coordinator to provide required assistance.

The Regional Law Enforcement Coordinator is responsible for coordination of use of the system within the Mutual Aid Region. The City of Pasadena Police Department participates in CLEMARS and is licensed for mobile and base station communications.

CLETS California Law Enforcement Telecommunications System

CLETS is a high-speed message switching system which became operational in 1970. CLETS provides law enforcement and criminal justice agencies access to various data bases and the ability to transmit and receive point-to-point administrative messages to other agencies within California or via the National Law Enforcement Telecommunications System (NLETS) to other states and Canada. Broadcast messages can be transmitted intrastate to participating agencies in the Group Bulletin Network and to regions nationwide via NLETS. CLETS has direct interface with the FBI-NCIC, NLETS, DMV, Oregon and Nevada. The State provides the computer hardware, switching center personnel, administrative personnel, and the circuitry to one point in each county. The local agencies provide the circuitry and equipment which link them to their county termination point. The CLETS terminal in the City of Pasadena is housed at the Police Department. The CLETS Information Manual is located in Police/Fire Communications.

EAS Emergency Alert System

Each state has been divided into a number of EAS operational areas, consisting of one or more counties within radio reception range of EAS stations serving the area. California has thirty EAS Operational Areas (OA). Almost all AM-FM and TV broadcast stations have national defense emergency authorizations and several of these are protected from fallout. The purpose of EAS in California is to provide warning, emergency information, guidance, instructions and news of a manmade or natural threat to the public safety, health and welfare.

One primary station in each OA assumes the function of the Common Program Control Broadcast Station for the OA. It is called the CPCS-1 station. If for any reason a CPCS-1 is unable to carry out this responsibility, either primary or alternate broadcast stations assigned as CPCS locations, will be activated in descending order. CPCS assignments are made by the FCC, not the State or local governments. OAs are urged to develop EAS systems that employ a system whereby the local OES feeds all the radio stations simultaneously and not just the CPCS-1 station.

See the Federal EAS description for Program Priorities. Message priorities are as follows:

- Priority One — Immediate and positive action without delay is required to save lives.
- Priority Two — Actions required for the protection of property and instructions to the public requiring expedient dissemination.
- Priority Three — Information to the public and all others.

EDIS Emergency Digital Information System

The EDIS provides local, state and federal agencies with a direct computer link to the news media and other agencies during emergencies. EDIS supplements existing emergency public information systems such as the Emergency Alert System. By combining existing data Input Networks with a digital radio Distribution System, EDIS gives authorized agencies a direct data link to the news media and other agencies.

The main purpose of EDIS is to distribute official information to the public during emergencies. However, a system that is not used day-to-day will not be used with confidence during an emergency. Therefore, certain non-emergency uses of EDIS are permitted so long as they do not interfere with more urgent transmissions.

EDIS may be used to transmit information in the following categories, listed in priority order:

- FLASH — Alerts and warning of immediate life-safety value to members of the public.
- NEWS — Information of immediate benefit to the public. Releases in this category may include reports of unusual natural, social or technological events; notices of government activities requiring specific action by members of the public; road and traffic information and instructions for those affected by an emergency.

- INFO Advisory messages for coordination between government and the news media. Topics might include: times and locations of news briefings, schedules for media tours of emergency scenes, "pool coverage" arrangements, airspace restrictions.
- TEST Transmissions to verify operation of equipment and for training of originating personnel.

Senders of EDIS messages should bear in mind that almost anyone can obtain the equipment to receive EDIS messages. Confidential or sensitive information should never be transmitted over EDIS.
(Reference: Emergency Digital Information System Plan [EDIS], July 1991, written by the OES Telecommunications Division.)

OASIS Operational Area Satellite Information System

The OASIS project, funded under the Earthquake Hazards Reduction Act of 1986, was established to create the most robust communications system possible using leased transponder space from commercial satellite operators. The result is the establishment of a system which allows virtually uninterruptible communication between state, regional and operational area level EOCs.

OASIS is a system that consists of a communications satellite, multiple remote sites and a hub.

The satellite is in a stationary or geo-synchronous orbit above the earth's equator. A high frequency (HF) radio system and a satellite communications network were constructed to link all 58 counties with State OES and other state agencies for disaster communications as well as day-to-day traffic. The system, which uses technology similar to cellular telephones, has 60 channels. When a user picks up the line, the system automatically searches for the best available channel.

The equipment necessary for the remote sites includes a six-foot diameter dish antenna using Very Small Aperture Terminal or VSAT technology. These sites were originally set up by OES and are capable of conducting six simultaneous voice conversations and one data channel at a rate of 9600 baud.

The final component is the hub. The hub is a large external dish antenna and a network control station which is managed by OES personnel. The hub provides access control for the system and can control up to 800 remote stations. OES personnel will use the hub to define the network, detect trouble and serve as an emergency alert network for other OES personnel.

OPERATIONAL AREA ALERTING, NOTIFICATION AND WARNING SYSTEMS

OASIS - Operational Area Satellite Information System

The County of Los Angeles has State Office of Emergency Services OASIS equipment installed in the County EOC. OASIS is a system that consists of a communications satellite, multiple remote sites and a hub. Through this system the County has the capability of contacting any other County in California either through voice or data transmission. The system also allows the County to have direct access to the State Office of Emergency Services and other participating state agencies.

EAS Emergency Alert System

The Common Program Control Station (CPCS) is a primary station in an operational area which, preferably, has special communication links with appropriate authorities, (i.e., National Weather Service, Civil Defense, Government authorities, etc.) As specified in the State EAS Operational Plan. The primary CPCS station is responsible for coordinating the carriage of common emergency program for its area. If it is unable to carry out this function, other Primary Stations in the operational area will be assigned the responsibility as indicated in the State EAS Operational Plan. Los Angeles County Operational Area CPCS stations are:

- KFI 640 AM
- KNX 1070 AM

Examples of emergencies identified by Los Angeles County Operational Area which may warrant either immediate or delayed response under EAS by the broadcast industry are earthquake, serious fires, heavy rains and flooding, widespread power failures, severe industrial accidents and hazardous material accidents.

EAS activation can be authorized by any one of the following parties:

- Director of Emergency Services or designee
- Assistant Director of Emergency Services
- Emergency Operations Center Watch Commander
- Authorized representative of the National Oceanic and Atmosphere Administration (NOAA)

ENN – Emergency News Network

The Los Angeles County ENN is a communications protocol that incorporates voice, data and video transmissions. It has been developed to provide direct access from local government agencies to media and corporate organizations for the immediate dissemination of emergency information.

Printed “text” information messages may be transmitted through any available Justice Data Interface Controller (JDIC) terminal directly to the commercial broadcast media and other public subscribers. The Statewide Emergency Digital Information Service

(EDIS) is used as the pathway for ENN messages and is monitored by local, state and national media. Local EAS voice and video broadcasts are accomplished at the Los Angeles County Operational Area Emergency Operations Center facility.

LOCAL ALERTING AND WARNING SYSTEMS (See Part Two, Operations Support Documentation, Alerting and Warning)

Cable TV

The City has agreements with Charter Communications and Altrio Communications to provide the public with alerting and notification of various disaster situations. This system includes break into all TVs that are a part of this cable system. The City's Cable Channels 55 and 56 will provide directions to the citizens via scrolled information. This includes a "leader" that will scroll across any TV station that is turned on directing viewers to tune to their local cable channel for more information.

Emergency Alert System (EAS)

The EAS is administered by the Sheriff of Los Angeles County. Activation of the Los Angeles County EAS shall be for emergency events and conditions of concern to a significant segment of the population of Los Angeles County. The message must be a voice message, it may be prerecorded and it must originate from the Sheriff's Communications Center.

Other warning systems utilized by the City of Pasadena include mobile emergency vehicle sirens and loudspeakers, helicopters using PA systems, local TV and radio and door-to-door notification by Neighborhood Watch Block Captains and law enforcement volunteers, explorers, reserve police officers, city staff and disaster service workers.

The City also utilizes a telephonic system to quickly recall EOC personnel. The system dials home, work, cell, pager and other numbers until it reaches the person. In addition, this system has the capability to notify the public.

EMERGENCY CONDITIONS AND WARNING ACTIONS

Methods of warning state and local governments of specific emergency conditions are described below:

Earthquake

Earthquakes occur without warning. OES could receive notification of an earthquake as well as subsequent information, including damage reports, from various sources, such as:

- University of California Seismological Observatory, Berkeley
- California Institute of Technology, Pasadena
- Water Resources Department
- OES Regional Offices
- Local Governments
- Federal/State Agencies

- Honolulu Observatory

This information may be received through NAWAS, radio, teletype and/or telephone and would be further disseminated as appropriate using any or all of these means. The State Warning Center has a seismic alarm system that activates during earthquakes, prompting duty personnel to investigate the disturbance.

Earthquake Advisories

Earthquake Advisories are statements by OES regarding scientific assessment that, within a specified period (usually 3-5 days) there is an enhanced likelihood for damaging earthquakes to occur in areas designated in the Advisory. Advisories are not formal predictions and are issued following earthquakes in which there is concern about subsequent damaging earthquakes. The basis of the advisories is existing knowledge of the seismic history and potential of the area under consideration.

Local Government

Upon notification of an Earthquake Advisory from OES, local government should: disseminate information to key personnel, ensure the readiness of systems essential to emergency operations; implement protective and mitigative actions; provide guidance to the public on appropriate precautionary actions.

Notification Process

The Office of Emergency Services will notify State agencies, local governments and designated Federal agencies of all Earthquake Advisories through a telecommunications and radio fan-out process.

The method of contact to State agencies, local governments and Federal agencies will vary depending upon the availability of communications. Systems to be used may include: The California Warning System (CALWAS), the California Law Enforcement Telecommunications System (CLETS), the California Emergency Services Radio System (CESRS), FAX and commercial telephone service.

OES WILL FOLLOW A FOUR-STEP PROCESS IN ISSUING AND CANCELING ADVISORIES:

1. Information regarding additional seismic activity will be disseminated in the form of an **Earthquake Advisory**. The Advisory will include information on the background of the Advisory, the areas included in the Advisory and the period of time in which the Advisory is in effect. **The Earthquake Advisory will be issued to jurisdictions determined to be located within the area of enhanced risk.** Advisories are usually issued for a 3-5 day period. OES will keep local governments advised of any updates on the situation as they become available.

   In most instances, the notification of the issuance of an Earthquake Advisory will be to the affected counties via CLETS, followed by an announcement

over CALWAS. It is the responsibility of county offices that receive the Advisory to forward the information immediately to all cities within the county and county emergency services coordinators. City offices that receive the Advisory should, in turn, forward the information to the city emergency services coordinator.

2. Following the issuance of the Earthquake Advisory to jurisdictions within the area of enhanced risk, OES will issue a **Notice of Earthquake Advisory** to State departments, specified Federal agencies and all other counties in the State.

   The Notice of Earthquake Advisory is issued for informational purposes. No specific actions are recommended to jurisdictions receiving this notice, except at the discretion of local officials. It will be disseminated via the same telecommunications systems as the Earthquake Advisory.

3. OES will inform the news media and public of an Earthquake Advisory by the issue of an **Earthquake Advisory News Release.**

4. At the end of the period specified in the initial Advisory, OES will issue an **End of Earthquake Advisory Period** message. This cancellation message will be issued over the same telecommunications systems as were used to initially issue the Advisory and Notice of Advisory to State agencies, local government, specified Federal agencies, the news media and the public. An Advisory may be extended if scientific assessments continue to indicate reasons for such a continuation.

Earthquake Prediction (Short-Term)

The Short-Term Earthquake Prediction Response Plan provides direction and guidance to State agencies for responding to (1) a prediction that an earthquake may occur within a few hours to a few days or (2) issuance of an Advisory regarding an increase likelihood that a damaging earthquake may occur. When implemented, the actions recommended within this Plan will result in increased operational readiness and preparedness of Stage agencies to deal effectively with a short-term earthquake prediction and with the predicted earthquake, should it occur.

Formal predictions include specific identification of expected magnitude, location, time and likelihood of occurrence (i.e., probability), that have been rigorously reviewed and confirmed by the California Earthquake Prediction Evaluation Council (CEPEC).

Fire

Initial warnings of major conflagrations are normally issued by the affected area through the Operational Area and/or OES Regional Fire Coordinator, using whatever means of communications are appropriate and available. Requests for mutual aid follow the same channels.

Flood

A flood emergency is normally preceded by a buildup period that permits marshaling of forces as required to combat the emergency. During the buildup period, OES cooperates with the National Weather Service and the State Department of Water Resources by relaying pertinent weather information and river bulletins to local government officials in the affected areas. OES receives this information over selected circuits and relays it to OES Regions through the OES private line teletype system and to law enforcement agencies via CLETS.

Flood Stages and Bulletins

During periods of potential flooding in Southern California, the National Weather Service, Los Angeles County, will issue the appropriate bulletins typically from San Diego. After receiving these messages, the state Warning Center transmits these messages immediately on CLETS to local governments in areas that are likely to be affected.

Hazardous Materials

Potential hazardous materials situations are identified during the planning phase by the Area Plan. Area Plans address in detail the specifics for hazardous materials planning for the local area. Initial notifications of an incident are made by the responsible party or the responding agency to the **California Warning Center in Sacramento at 800/852-7550** as soon as the incident occurs. The Warning Center then makes notifications to various state agencies and the regional duty officer.

Homeland Security Advisory System

The Federal Government has implemented the Homeland Security Advisory System (HSAS) to provide a comprehensive and effective means to disseminate information regarding the risk of terrorist acts.

The HSAS is designed to target our protective measures when specific information to a specific sector or geographic region is received. It combines threat information with vulnerability assessments and provides communications to public safety officials and the public.

- **Homeland Security Threat Advisories** contain actionable information about an incident involving, or a threat targeting, critical national networks or infrastructures or key assets. They could, for example, relay newly developed procedures that, when implemented, would significantly improve security or protection. They could also suggest a change in readiness posture, protective actions, or response. This category includes products formerly named alerts, advisories, and sector notifications. Advisories are targeted to Federal, state, and local governments, private sector organizations, and international partners.

- **Homeland Security Information Bulletins** communicate information of interest to the nation's critical infrastructures that do not meet the timeliness, specificity, or significance thresholds of warning messages. Such information may include

statistical reports, periodic summaries, incident response or reporting guidelines, common vulnerabilities and patches, and configuration standards or tools. It also may include preliminary requests for information. Bulletins are targeted to Federal, state, and local governments, private sector organizations, and international partners.

- **Color-coded Threat Level System** is used to communicate with public safety officials and the public at-large through a threat-based, color-coded system so that protective measures can be implemented to reduce the likelihood or impact of an attack. Raising the threat condition has economic, physical, and psychological effects on the nation; so, the Homeland Security Advisory System can place specific geographic regions or industry sectors on a higher alert status than other regions or industries, based on specific threat information.

Refer to the Management Support Documentation for HSAS guidance.

Seismic Sea Wave (Tsunami)

NAWAS is an integral part of the Tsunami alerting system. Reports of major earthquakes occurring at any point in the Pacific Basin which may generate seismic sea waves are transmitted to the Honolulu Observatory for evaluation. The Observatory staff determines action to be taken and relays it over the NAWAS circuits to inform the West Coast states. The State NAWAS circuit is used to relay the information to local Warning Points in coastal counties. This information is also transmitted to local jurisdictions over appropriate radio systems, teletype and telephone circuits to ensure maximum dissemination.

A Tsunami **Watch Bulletin** is issued if an earthquake has occurred in the Pacific Basin and could cause a tsunami. A Tsunami **Warning Bulletin** is issued when an earthquake has occurred and a tsunami is spreading across the Pacific Ocean. When a threat no longer exists, a **Cancellation Bulletin** is issued. The City of Pasadena is not in a Tsunami inundation area.

Severe Weather Warning

These include severe weather bulletins and statements relating to special weather conditions. Bulletins are issued by National Weather Service offices in California when severe weather is imminent. By agreement, the National Weather Service office issues the bulletin and transmits the information to the state Warning Center on the National Weather Service teletype circuit. The Warning Center, in turn, relays the information to the affected areas.

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SECTION TWO

AUTHORITIES AND REFERENCES

GENERAL

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 SEMS as the 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 statewide 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/disaster plans are, therefore, considered to be extensions of the California Emergency Plan.

EMERGENCY PROCLAMATIONS

Local Emergency

A Local Emergency may be proclaimed by the City Council or by the City Manager (Director of Disaster Emergency Services) as specified by ordinance adopted by the City Council. A Local Emergency proclaimed by the City Manager must be ratified by the City Council within seven days. The governing body must review the need to continue the proclamation at least every twenty one days until the Local Emergency is terminated. The Local Emergency must be terminated by resolution 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 city, caused by natural or man-made situations.

The proclamation of a Local Emergency provides the governing body with the legal authority to:

- If necessary, request that the Governor proclaim a State of Emergency and/or request a Presidential declaration.
- 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 and 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 when:

- 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 is requested to do so by local authorities.
- He 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, plus:

- 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 Civil Defense Act of 1950 (Public Law 920), as amended.

National Incident Management System, U.S. Department of Homeland Security, March 1, 2004.

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 Natural Disaster Assistance Act (Chapter 7.5 of Division 1 of Title 2 of the Government Code).

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.

Executive Order S-2-05, National Incident Management System Integration into the State of California.

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.

Local

Title 2, Chapter 2.370, Disaster Emergency Services Council, City of Pasadena Municipal Code.

City of Pasadena Resolution No. ____adopting the SEMS Multihazard Functional Plan (__/06), adopted ____.

Resolution No. _____ adopting Workmen's Compensation Benefits for Disaster Service Workers, adopted _____.

Resolution No. 7665 adopting the Master Mutual Aid agreement, adopted January 30, 1951.

Statement of Understanding between the City of Pasadena and the San Gabriel Valley - Pomona Chapter of the American Red Cross dated March 30, 1997.

REFERENCES

National Response Plan (U.S. Department of Homeland Security).
NRT-1, Hazardous Materials Emergency Planning Guide and NRT-1A Plan Review Guide (Environmental Protection Agency's National Response Team).
National Response Plan, U.S. Department of Homeland Security, November 2004.
Disaster Assistance Procedure Manual (State OES).
California Emergency Plan.
California Emergency Resources Management Plan.
California Hazardous Materials Incident Contingency Plan.
California Master Mutual Aid Agreement, September 1975.
California Law Enforcement Mutual Aid Plan.
California Fire and Rescue Operations Plan.
City of Pasadena Hazardous Material Emergency Response Plan, revised 2006
Los Angeles County Operational Area Organization Agreement adopted _____.
Los Angeles County Multihazard Functional Plan adopted ----------.

SECTION THREE
MUTUAL AID

INTRODUCTION

The foundation of California's emergency planning and response is a statewide mutual aid system which is designed to ensure that adequate resources, facilities and other support is provided to jurisdictions whenever their own resources prove to be inadequate to cope with a given situation(s). The basis for the system is the California Disaster and Civil Defense Master Mutual Aid Agreement, as provided for in the California Emergency Services Act. This Agreement was developed in 1950 and has been adopted by the state, all 58 counties and most incorporated cities in the State of California. The Master Mutual Aid Agreement creates a formal structure wherein each jurisdiction retains control of its own facilities, personnel and resources, but may also receive or render assistance to other jurisdictions within the state. State government is obligated to provide available resources to assist local jurisdictions in emergencies. It is the responsibility of the local jurisdiction to negotiate, coordinate and prepare mutual aid agreements. Mutual aid agreements exist in law enforcement, fire services, building and safety, medical and public works and emergency managers (EMMA). In addition to the Mutual Aid agreements that are in place within the state of California, more recently, the Governor signed (September 2005) the Emergency Management Assistance Compact (EMAC) which allows the state of California to participate with 50 other states in a nationwide mutual aid system.

MUTUAL AID SYSTEM

A statewide mutual aid system, operating within the framework of the Master Mutual Aid Agreement, allows for the progressive mobilization of resources to and from emergency response agencies, local governments, operational areas, regions and state with the intent to provide requesting agencies with adequate resources. The general flow of mutual aid resource requests and resources within mutual aid systems are depicted in the diagram in **Chart 1.**

The statewide mutual aid system includes several discipline-specific mutual aid systems, such as fire and rescue, law, medical and public works. The adoption of SEMS does not alter existing mutual aid systems. These systems work through local government, operational area, regional and state levels consistent with SEMS.

Mutual aid may also be obtained from other states. Interstate mutual aid may be obtained through direct state-to-state contacts, pursuant to interstate agreements and compacts, or may be coordinated through federal agencies.

MUTUAL AID REGIONS

Mutual aid regions are established under the Emergency Services Act by the Governor. Six mutual aid regions numbered I-VI have been established within California. The City of Pasadena is within Region I. Each mutual aid region consists of designated counties. Region I is in the OES Southern Administrative Region. (**See Chart 3)**

MUTUAL AID COORDINATORS

To facilitate mutual aid, discipline-specific mutual aid systems work through designated mutual aid coordinators at the operational area, regional and state levels. The basic role of a mutual aid coordinator is to receive mutual aid requests, coordinate the provision of resources from within the coordinator's geographic area of responsibility and pass on unfilled requests to the next level.

Mutual aid requests that do not fall into one of the discipline-specific mutual aid systems are handled through the emergency services mutual aid system by emergency management staff at the local government, operational area, regional and state levels. The flow of resource requests and information among mutual aid coordinators is illustrated in **Chart 2.**

Mutual aid coordinators may function from an EOC, their normal departmental location or other locations depending on the circumstances. Some incidents require mutual aid but do not necessitate activation of the affected local government or operational area EOCs because of the incident's limited impacts. In such cases, mutual aid coordinators typically handle requests from their normal work location. When EOCs are activated, all activated discipline-specific mutual aid systems should establish coordination and communications with the EOCs:

- When an operational area EOC is activated, operational area mutual aid system representatives should be at the operational area EOC to facilitate coordination and information flow.

- When an OES regional EOC (REOC) is activated, regional mutual aid coordinators should have representatives in the REOC unless it is mutually agreed that effective coordination can be accomplished through telecommunications. State agencies may be requested to send representatives to the REOC to assist OES regional staff in handling mutual aid requests for disciplines or functions that do not have designated mutual aid coordinators.

- When the State Operations Center (SOC) is activated, state agencies with mutual aid coordination responsibilities will be requested to send representatives to the SOC.

Mutual aid system representatives at an EOC may be located in various functional elements (sections, branches, groups or units) or serve as an agency representative, depending on how the EOC is organized and the extent to which it is activated.

PARTICIPATION OF VOLUNTEER AND PRIVATE AGENCIES

Volunteer agencies and private agencies may participate in the mutual aid system along with governmental agencies. For example, the disaster medical mutual aid system relies heavily on private sector involvement for medical/health resources. Some volunteer agencies such as the American Red Cross, Salvation Army, Radio Amateur Civil Emergency Services, Pasadena Emergency Preparedness Partnership, Disaster

Communication Services and others are an essential element of the statewide emergency response to meet the needs of disaster victims. Volunteer agencies mobilize volunteers and other resources through their own systems. They also may identify resource needs that are not met within their own systems that would be requested through the mutual aid system. Volunteer agencies with extensive involvement in the emergency response should be represented in EOCs.
Some private agencies have established mutual aid arrangements to assist other private agencies within their functional area. For example, electric and gas utilities have mutual aid agreements within their industry and established procedures for coordinating with governmental EOCs. In some functional areas, services are provided by a mix of special district, municipal and private agencies. Mutual aid arrangements may include both governmental and private agencies.

Liaison should be established between activated EOCs and private agencies involved in a response. Where there is a need for extensive coordination and information exchange, private agencies should be represented in activated EOCs at the appropriate SEMS level.

EMERGENCY FACILITIES USED FOR MUTUAL AID

Incoming mutual aid resources may be received and processed at several types of facilities including: marshaling areas, mobilization centers and incident facilities. Each type of facility is described briefly below.

Marshaling Area: Defined in the Federal Response Plan as an area used for the complete assemblage of personnel and other resources prior to their being sent directly to the disaster affected area. Marshaling areas may be established in other states for a catastrophic California earthquake.

Mobilization Center: Off-incident location at which emergency/disaster service personnel and equipment are temporarily located pending assignment, release or reassignment. For major area-wide disasters, mobilization centers may be located in or on the periphery of the disaster area.

Incident Facilities/Staging Areas: Incoming resources may be sent to staging areas, other incident facilities or directly to an incident, depending on the circumstances. Staging areas are temporary locations at an incident where personnel and equipment are kept while awaiting tactical assignments.

POLICIES AND PROCEDURES

- Mutual aid resources will be provided and utilized in accordance with the California Master Mutual Aid Agreement.
- During a proclaimed emergency/disaster, inter-jurisdictional mutual aid will be coordinated at the county, operational area or mutual aid regional level.

- Because different radio frequencies are in use among most agencies, local agencies should provide incoming mutual aid forces with portable radios having local frequencies.
- The City of Pasadena will make all non-law and non-fire mutual aid requests through the Los Angeles County Operational Area. Requests should specify, at a minimum:

    - Number and type of personnel needed.
    - Type and amount of equipment needed.
    - Reporting time and location.
    - Authority to whom forces should report.
    - Access routes.
    - Estimated duration of operations.
    - Risks and hazards.

AUTHORITIES AND REFERENCES

Mutual aid assistance may be provided under one or more of the following authorities:

- California Master Mutual Aid Agreement.
- California Fire and Rescue Emergency Plan.
- California Fire Assistance Agreement 2002-2006
- California Law Enforcement Mutual Aid Plan.
- Robert T. Stafford Disaster Relief and Emergency Assistance Act (Public Law 93-288, as amended)-provides federal support to state and local disaster activities.
- California Emergency Managers Mutual Aid Agreement, November 1997
- Joint Communications System, Burbank, Glendale and Pasadena, _____
- Public Works Equipment, Burbank, Glendale and Pasadena, _____
- Area C Joint Powers Agreement, Approve City of Pasadena June 13, 2005
- Emergency Management Assistance Compact, September 2005

Chart 1

MUTUAL AID CONCEPT:
Flow of Resource Requests

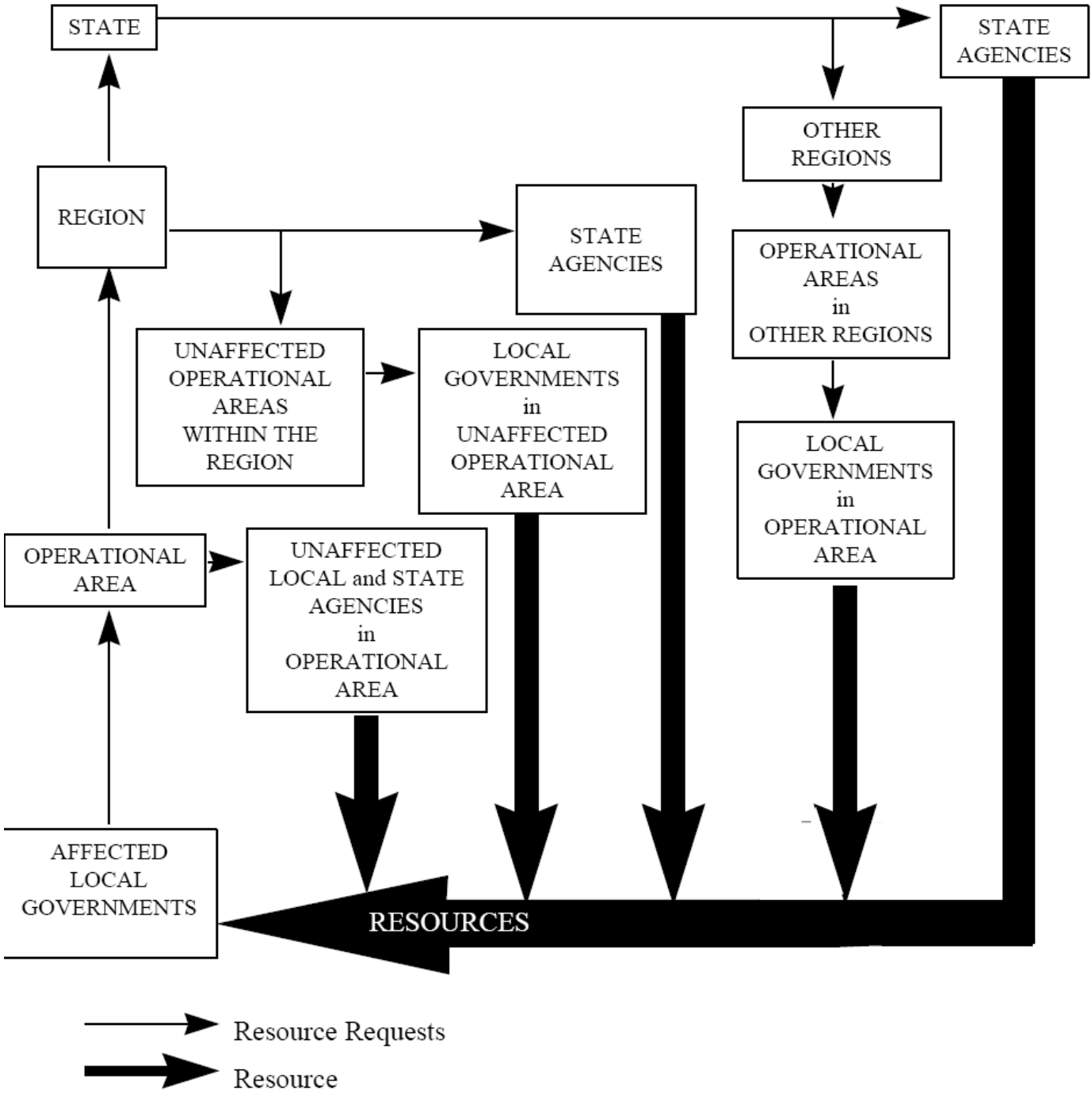
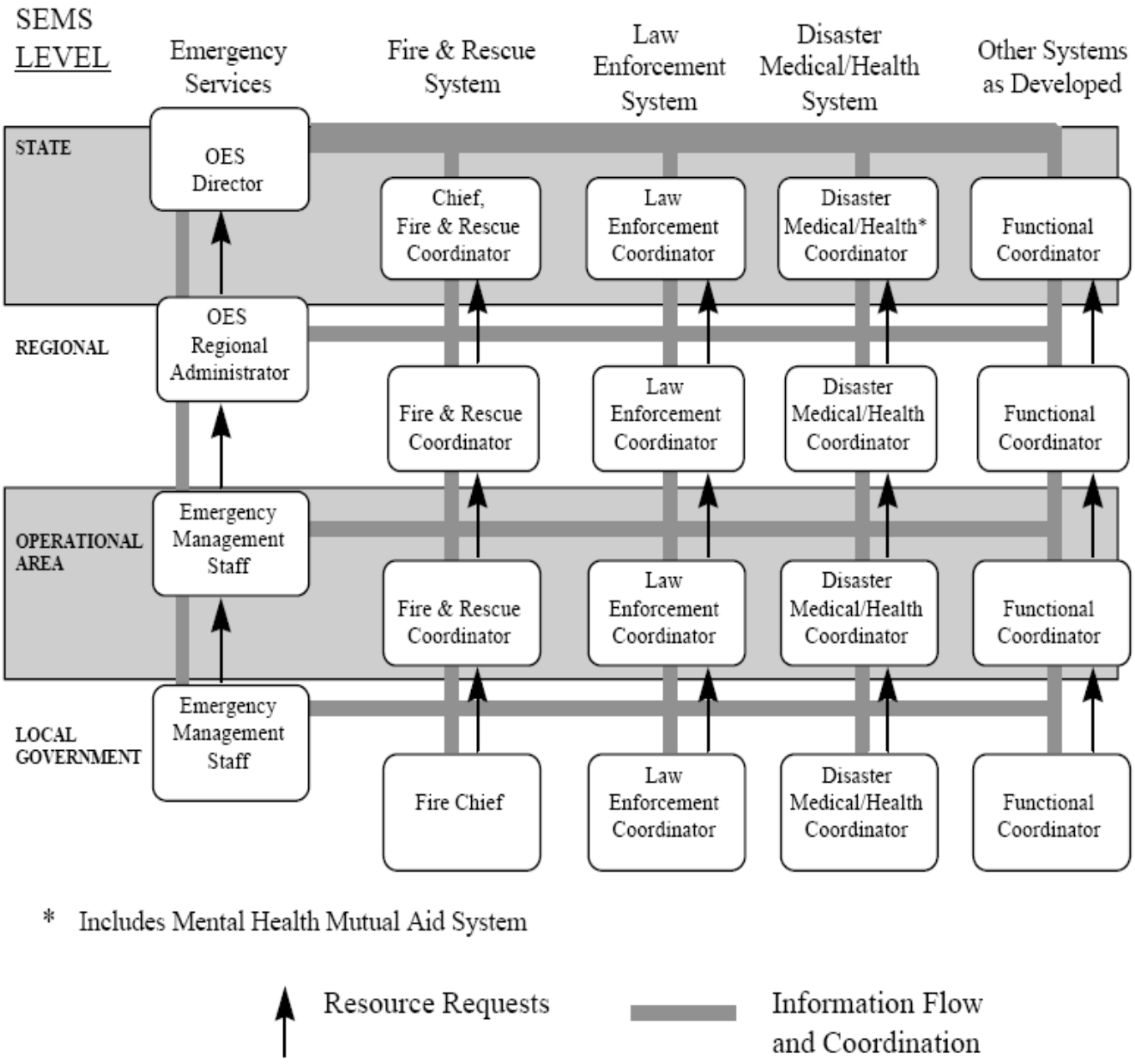


Chart 2

MUTUAL AID CHANNELS:
Discipline Specific Mutual Aid Systems



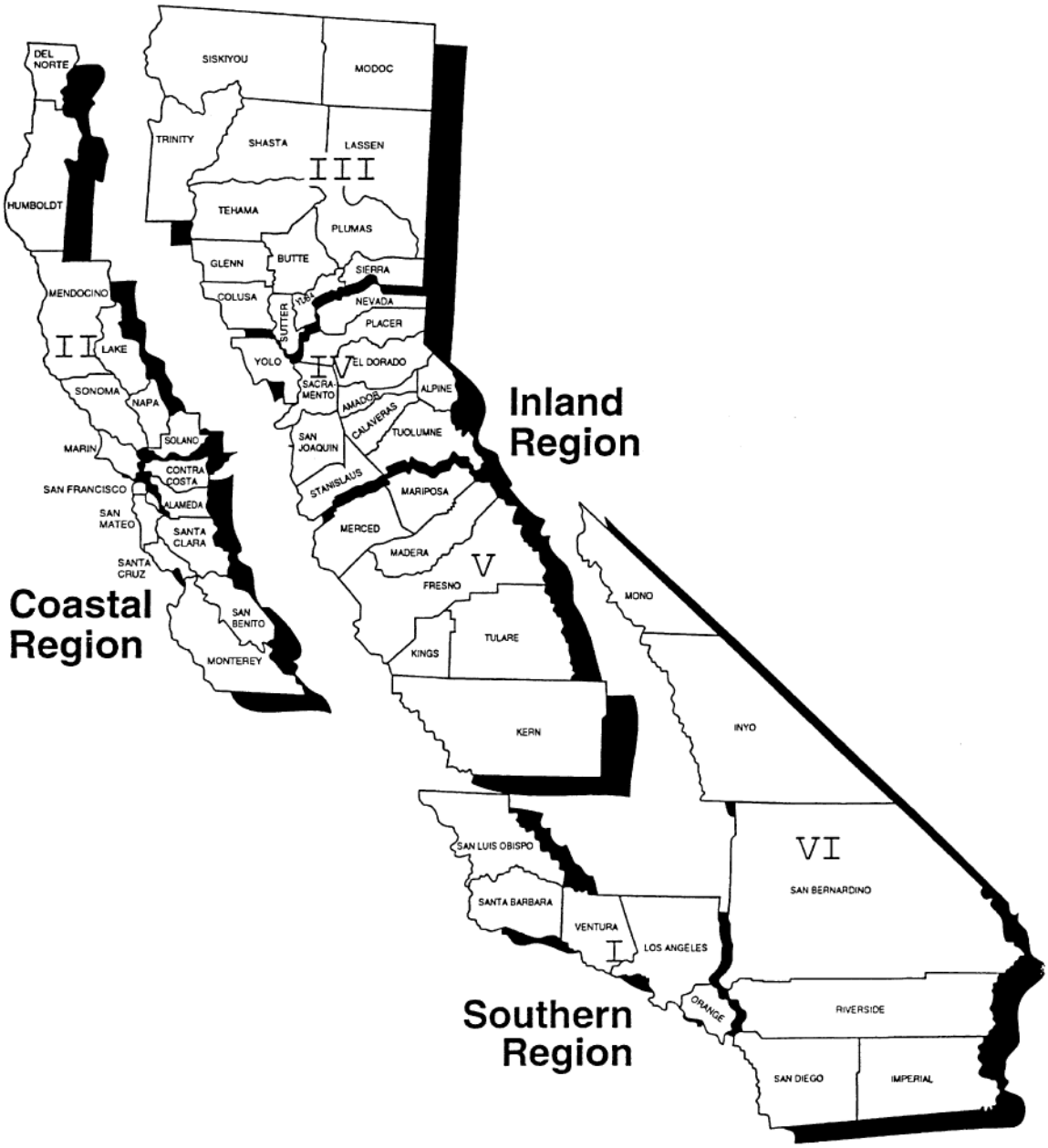
* Includes Mental Health Mutual Aid System

Resource Requests

Information Flow and Coordination

CHART 3

California Governor's Office of Emergency Services
Administrative Regions and Mutual Aid Regions



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SECTION FOUR

THREAT SUMMARY FOR CITY OF PASADENA

This section of the Basic Plan (Part One) consists of a series of threat summaries based on the City of Pasadena's Safety Element (2002) of the General Plan and the Hazard Mitigation Plan (2004). The purpose is to describe the area at risk and the anticipated nature of the situation, which could result should the event threaten or occur.

The City of Pasadena is located within Area C, Los Angeles County (northeast section), Southern Administrative Region of State Office of Emergency Services. Pasadena is located 10 miles northeast of downtown Los Angeles. The City is bordered by the San Gabriel Mountains to the north and seven cities--La Canada Flintridge, South Pasadena, Arcadia, Sierra Madre, San Marino, Glendale, Los Angeles and unincorporated Altadena. The latitude is N. 34 9' and longitude is W. 118 10'. Pasadena has a residential population of 136,237 (Census 2000). Pasadena consists of 23 square miles and is approximately 58% residential, 9% commercial, 2% industrial and 31% open space, parks, institutional or vacant land (Land Use Element of Revised General Plan).

The City of Pasadena has 24 elementary schools, 3 middle schools, 4 high schools, 38 private schools, 69 pre-schools or child care centers and 16 colleges/universities. It has one major hospital: Huntington Memorial, as well as a psychiatric facility: Las Encinas. The City is home to many light manufacturing and technology companies as well as The Norton Simon Museum, and California Institute of Technology.

The City is served by the 210, 134, 710 and 110 freeways, and the major arterial highways are Fair Oaks Avenue, Lake Avenue, and Los Robles Avenue, which run north to south and Colorado Blvd., Walnut Street, Del Mar Boulevard, and Green Street, which run east to west.

- An earthquake could impact major segments of, or the total population.
- Many major highways (and light rail lines) traverse or pass near the City and transportation incidents (including hazardous material incidents) as well as pipeline ruptures or illegal dumping could affect the City. The City has some industry and faces the potential for hazardous materials incidents from the stationary hazardous materials users as well.
- Many areas of the City may be subject to flooding, due to flash flooding, urban flooding (storm drain failure/infrastructure breakdown), river channel overflow, downstream flooding, etc. The City has historically been vulnerable to tropical storms and severe winter storms.
- A transportation incident such as a major air crash, light train derailment or trucking incident could impact areas within the City.
- A civil unrest incident could impact areas within the City or the entire City.

- The entire Los Angeles Basin is considered as a possible risk area for a nuclear event or act of terrorism; therefore both sheltering and evacuation should be considered. Neither the City nor the County of Los Angeles has the capability to plan for the organized evacuation of the basin; therefore, the extent of planning at this time is restricted to assisting and expediting spontaneous evacuation. In the increased readiness stage, expedient shelters will be utilized as appropriate and information will be provided to the public as the City no longer maintains public fallout shelters.
- There are two major dams located in or upstream from the Pasadena area: the Devils Gate Reservoir and the Eaton Canyon Reservoir.

Any single incident or a combination of events could require evacuation and/or sheltering of the population.

The City has its own police, fire, public health and public works departments and may involve a local county volunteer organization, the Los Angeles County Disaster County Services group, for communications assistance. Another local volunteer group, the Emergency Medical Services Reserves, is trained to provide medical assistance.

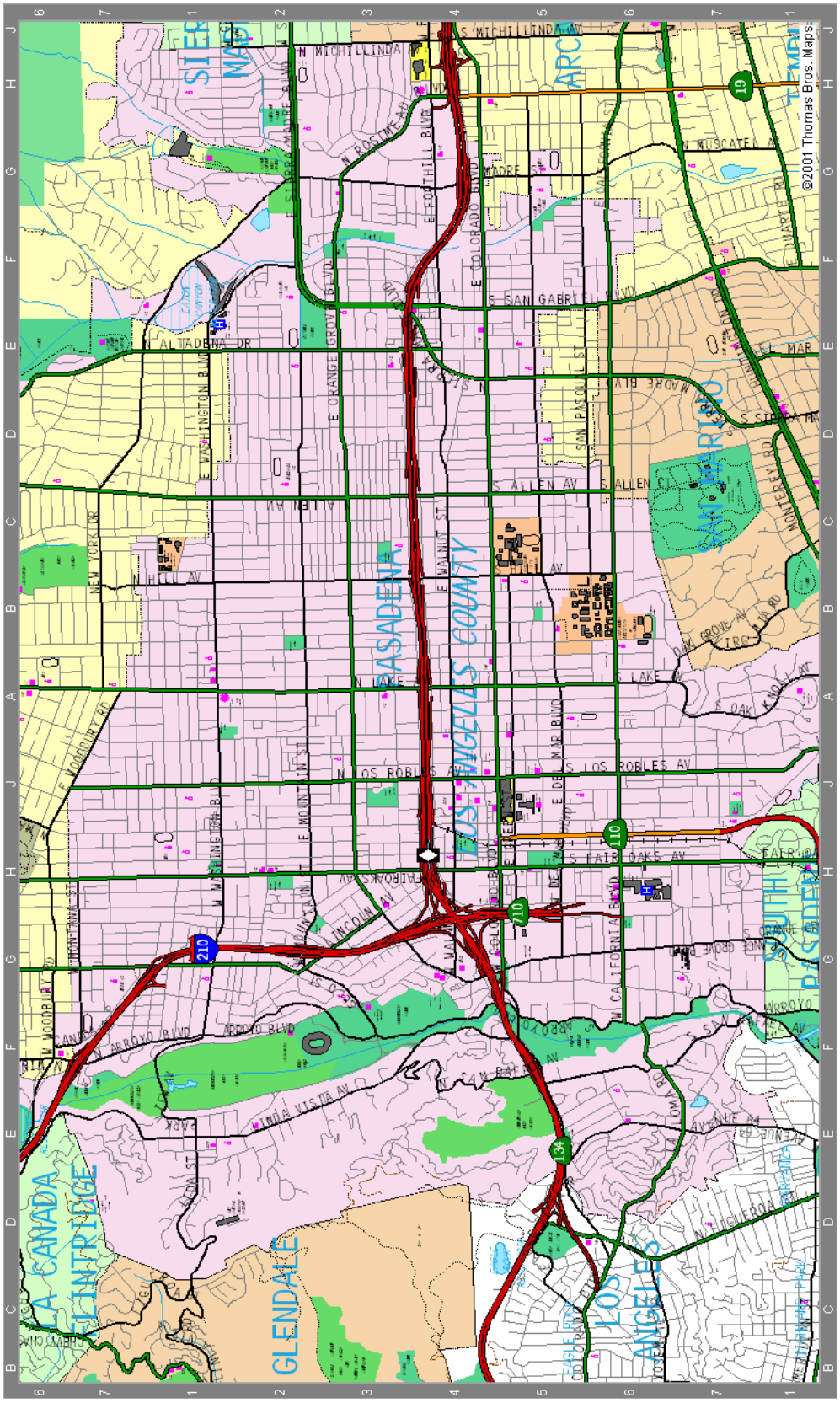
City staff has been designated to coordinate all SEMS functions.

During the response phase, either the Cresenta Valley Sheriff's Station EOC or the Watch Commander is the coordination and communication point to the Los Angeles County Operational Area.

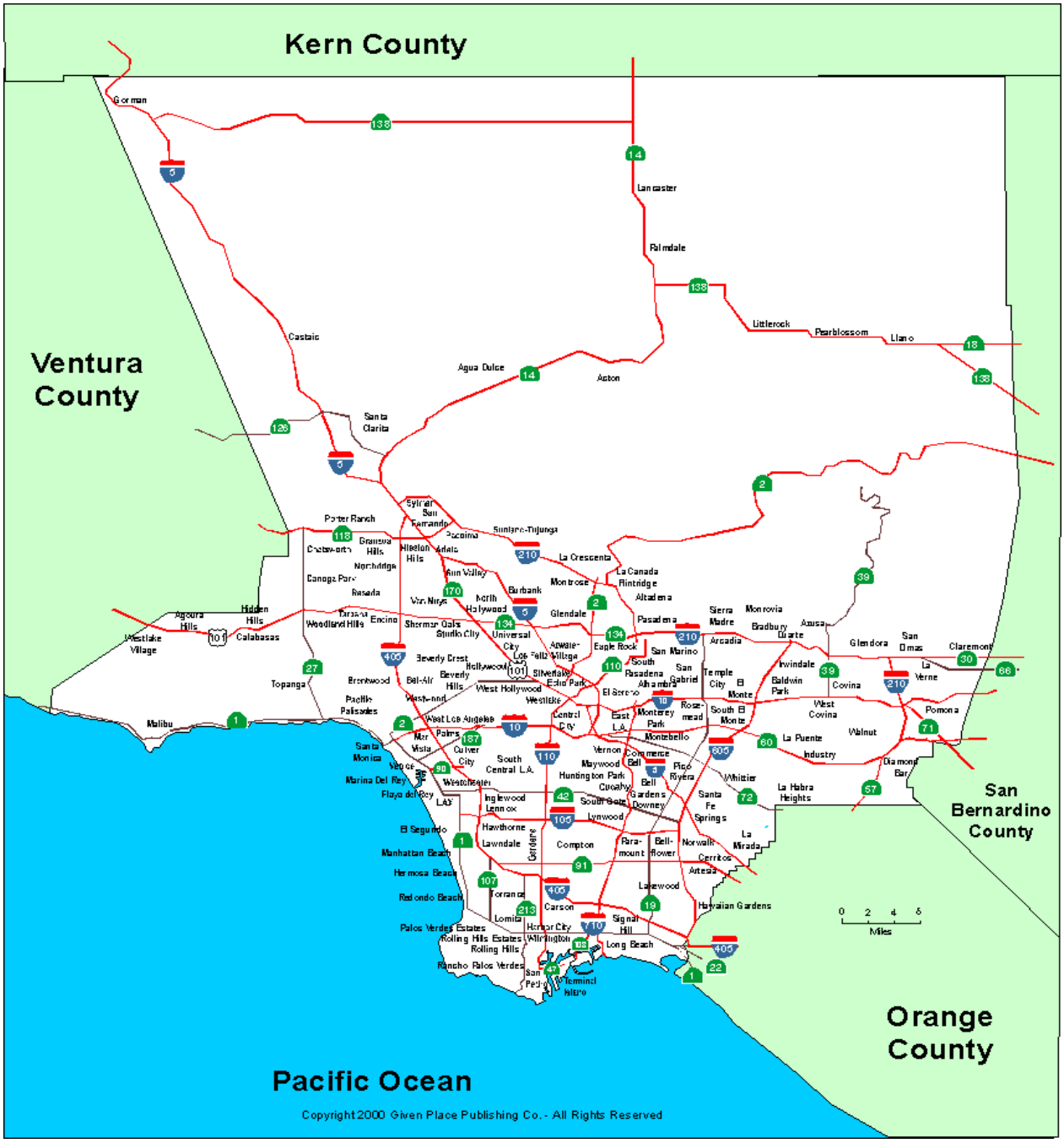
The following threat assessments identify and summarize the hazards that could impact the City of Pasadena.

Threat Assessment 1 - Major Earthquake
Threat Assessment 2 - Hazardous Materials
Threat Assessment 3 - Flooding
Threat Assessment 4 – Dam Failure
Threat Assessment 5 – Fire
Threat Assessment 6A – Transportation - Air Crash
Threat Assessment 6B – Transportation - Train Derailment
Threat Assessment 6C – Transportation – Trucking Incident
Threat Assessment 7 - Civil Unrest
Threat Assessment 8 - Terrorism
Threat Assessment 9 - National Security Emergency
Threat Assessment 10 – Landslide

City of Pasadena - MAP



CITY MAP
ADJACENT JURISDICTIONS



THREAT ASSESSMENT 1

MAJOR EARTHQUAKE

GENERAL SITUATION

The City of Pasadena is in the vicinity of several known active and potentially active earthquake faults including the San Andreas (100 miles from the City), Whittier-Elsinor, Newport-Inglewood, Sierra Madre, Raymond Hill, Elysian Park, San Gabriel, San Fernando Verdugo Hills, Hollywood, and the Santa Monica. (see **Attachment 1, map**).The highest risks originate from the Sierra Madre fault zone, the Verdugo fault zone, the Elysian Park fault zone, and the Raymond fault zone. New faults within the region are continuously being discovered. The January 17, 1994 magnitude 6.7 Northridge Earthquake (thrust fault) which produced severe ground motions, caused 57 deaths, and 9,253 injuries. For days afterward, thousands of homes and businesses were without electricity; tens of thousands had no gas; and nearly 50,000 had little or no water. Approximately 15,000 structures were moderately to severely damaged, which left thousands of people temporarily homeless. 66,500 buildings were inspected. Nearly 4,000 were severely damaged and over 11,000 were moderately damaged. Several collapsed bridges and overpasses created commuter havoc on the freeway system. Extensive damage was caused by ground shaking, but earthquake triggered liquefaction and dozens of fires also caused additional severe damage. This extremely strong ground motion in large portions of Los Angeles County resulted in record economic losses. Scientists have stated that such devastating shaking should be considered the norm near any large thrust earthquake.

A major earthquake occurring in or near this jurisdiction may cause many deaths and casualties, extensive property damage, fires and hazardous material spills and other ensuing hazards. The effects could be aggravated by aftershocks and by the secondary affects of fire, hazardous material/chemical accidents and possible failure of the waterways and dams. The time of day and season of the year would have a profound effect on the number of dead and injured and the amount of property damage sustained. Such an earthquake would be catastrophic in its affect upon the population and could exceed the response capabilities of the individual cities, Los Angeles County Operational Area and the State of California Emergency Services. Damage control and disaster relief support would be required from other local governmental and private organizations, and from the state and federal governments.

Extensive search and rescue operations would be required to assist trapped or injured persons. Emergency medical care, food and temporary shelter could be required by injured or displaced persons. Identification and burial of many dead persons could pose difficult problems; public health would be a major concern. Mass evacuation may be essential to save live downwind from hazardous material releases. Many families would be separated particularly if the earthquake should occur during working hours, and a personal inquiry or locator system could be essential to maintain morale. Emergency

operations could be seriously hampered by the loss of communications and damage to transportation routes within, and to and from, the disaster area and by the disruption of public utilities and services.

The economic impact on the City of Pasadena from a major earthquake would be considerable in terms of loss of employment and loss of tax base. Also, a major earthquake could cause serious damage and/or outage of computer facilities. The loss of such facilities could curtail or seriously disrupt the operations of banks, insurance companies and other elements of the financial community. In turn, this could affect the ability of local government, business and the population to make payments and purchases.

SPECIFIC SITUATION

The potential hazards that the City of Pasadena may face in an earthquake include the following:

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.

The map of southern California produced under the National Seismic Hazard Mapping Program shows that Pasadena can be exposed to very high values of ground shaking, with a 10 percent chance that accelerations more than 40 percent the force of gravity (0.4g) could occur in 50 years. These probabilistic ground motion values for the City of Pasadena are in the moderate to high range for southern California and are the result of the City’s proximity to major fault systems with high earthquake recurrence rates.

Table 1-1 from the City’s Safety Element shows the estimated horizontal peak ground accelerations and seismic Intensities in the Pasadena area.

Liquefaction

Many areas may have buildings destroyed or unusable due to the phenomenon of liquefaction (see **Attachment 2**). Liquefaction is a phenomenon involving the loss of shear strength of a soil. The shear strength loss results from the increase of poor water

Table 1-1

Estimated Horizontal Peak Ground Accelerations and Seismic Intensities in the Pasadena Area

Fault Name	Distance to Sites (m)	Distance to Sites (km)	Magnitude of M_{max} *	PGA (g) from M_{max}	MMI from M_{max}
Sierra Madre	0.0 - 5.3	0.0 - 8.5	7.0	0.470 - 0.750	X - XI
Verdugo	0.0 - 2.7	0.0 - 4.4	6.7	0.530 - 0.640	X - X
Elysian Park Thrust	1.7 - 9.3	2.8 - 14.9	6.7	0.283 - 0.586	IX - X
Raymond	0.0 - 6.6	0.0 - 10.6	6.5	0.318 - 0.576	IX - X
Clamshell-Sawpit	3.7 - 10.0	5.9 - 16.1	6.5	0.241 - 0.430	IX - X
Hollywood	3.3 - 9.4	5.3 - 15.2	6.4	0.238 - 0.425	IX - X
Sierra Madre (San Fernando)	6.1 - 15.1	9.8 - 24.3	6.7	0.199 - 0.370	VIII - IX
San Gabriel	6.8 - 16.4	11.0 - 26.4	7.0	0.181 - 0.332	VIII - IX
Northridge (E. Oak Ridge)	12.4 - 20.6	20.0 - 33.2	6.9	0.175 - 0.256	VIII - VIII
San Andreas - 1857 Rupture	20.8 - 27.7	33.5 - 44.5	7.8	0.185 - 0.230	VIII - IX
Compton Thrust	13.5 - 19.5	21.8 - 31.4	6.8	0.174 - 0.228	VIII - IX
Cucamonga	16.7 - 23.2	26.9 - 37.4	7.0	0.169 - 0.217	VIII - VIII
Whittier	11.2 - 20.8	18.1 - 33.5	6.8	0.136 - 0.214	VIII - VIII
San Jose	12.1 - 21.1	19.4 - 34.0	6.5	0.140 - 0.212	VIII - VIII
Santa Monica	13.9 - 20.3	22.3 - 32.6	6.6	0.152 - 0.202	VIII - VIII
Newport-Inglewood (L.A.Basin)	14.7 - 19.6	23.7 - 31.5	6.9	0.150 - 0.186	VIII - VIII
Chino Central Avenue (Elsinore)	18.9 - 28.1	30.4 - 45.3	6.7	0.125 - 0.169	VIII - VIII
Santa Susana	18.0 - 26.5	28.9 - 42.6	6.6	0.124 - 0.166	VII - VIII
San Andreas - Mojave	20.8 - 27.7	33.5 - 44.5	7.1	0.128 - 0.159	VIII - VIII
Malibu Coast	20.8 - 27.2	33.5 - 43.8	6.7	0.128 - 0.157	VIII - VIII
Anacapa-Dume	31.4 - 36.9	50.6 - 59.4	7.3	0.139 - 0.157	VIII - VIII
Palos Verdes	23.1 - 29.0	37.1 - 46.6	7.1	0.124 - 0.147	VII - VIII
San Andreas - Coachella	32.5 - 39.0	52.3 - 62.7	7.4	0.115 - 0.133	VII - VIII
Holser	23.1 - 31.8	37.2 - 51.1	6.5	0.102 - 0.130	VII - VIII
Oak Ridge (Onshore)	31.3 - 39.5	50.3 - 63.5	6.9	0.107 - 0.128	VII - VIII
San Andreas - San Bernardino	32.5 - 39.0	52.3 - 62.7	7.3	0.109 - 0.126	VII - VIII
San Andreas - Carrizo	35.9 - 45.6	57.8 - 73.4	7.2	0.092 - 0.111	VII - VII
Simi-Santa Rosa	36.5 - 40.0	58.8 - 64.3	6.7	0.095 - 0.102	VII - VII

* The M_{max} reported herein are based on the fault parameters published by the CGS (CDMG, 1996). However, as described further below, recent paleoseismic studies suggest that some of these faults, like the Sierra Madre fault, can generate even larger earthquakes than those listed above. These PGAs were calculated using Blake's (2000) deterministic analysis software. Areas closer to a given fault will generally experience higher accelerations than areas farther away, therefore the range in PGAs given for each fault.

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. Areas near existing stream channels, such as Eaton Wash and Arroyo Seco, may be especially vulnerable to liquefaction.

DAMAGE TO VITAL PUBLIC SERVICES, SYSTEMS AND FACILITIES

Bed Loss in Hospitals

Pasadena has one major medical facility, Huntington Memorial Hospital (525 beds). Public service agencies and volunteer personnel would be used to assist in the care of the injured.

Several of the acute care hospitals in Los Angeles County may 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 Los Angeles County Department of Health and Human Services 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.

Communications - Telephone System

Telephone communication systems may fail due to physical damage of equipment, facilities and support utilities. Circuits could be overloaded by telephone receivers being knocked off their cradles and/or individuals trying to call in and out of the area. There may be an immediate telephone communications blackout following the earthquake, with partial communications being restored after the first 24 to 72 hours. 9-1-1 may also be disrupted.

The commercial carriers will institute network control procedures to regain control of the situation as quickly as possible. Priorities have been assigned to all critical circuits transiting the key facilities, based on established criteria.

Radio Systems

Most 2-way radio communications systems consist of a source of power, an antenna, and a radio. Emergency power failures have been the primary cause of communications shortfalls in past disasters. The presumed scarcity of fuel after an earthquake will strictly limit the viability of surviving communications sites, as this scarcity will undoubtedly impact backup generators.

Frequent maintenance of equipment in installations according to approved seismic specifications could reduce the failure potential. Developing alternate power sources such as wind, solar and/or battery banks, could extend operating capabilities with a reduction in fuel consumption.

Earthquake movement has little effect on properly installed antenna systems. Most failures are due to the failure of the building or structure supporting the antenna. Repeaters, used to extend the radio's range, are positioned on mountain tops. Antennas and related structures are expected to remain about 70% viable. Mobile relays may be 60% effective and microwave systems 30% or less.

Solid state electronics has produced communication devices which are small, lightweight and dependable. The amount of damage they sustain will depend on their location and how well they are secured. Fixed 2-way radio systems are expected to operate at about 40% effectiveness for the first 12 hours following a major earthquake. It is recommended to maintain a cache of charged portable radios and batteries ready to deploy during a large scale disaster or any sustained response operation.

Los Angles County Disaster Communications Services group may be called upon to provide support communications. However, circumstances may affect their response capabilities.

Dam and Flood Control Channels

There are two major dams located in or upstream from the Pasadena area, the Devils Gate Reservoir and the Eaton Canyon Reservoir. However, because of the current design and construction practices and ongoing programs of review and modification, catastrophic dam failure is considered unlikely. Many flood control channels are expected to suffer.

Landslides

Landslides may also occur during aftershocks in areas already weakened by the first shock. Large boulders and/or soft soil could be jarred loose. Secondary health problems due to resulting high concentrations of dust could cause problems for victims and rescue workers.

Electrical Power

Major power plants are expected to sustain some damage due to liquefaction and the intensity of the earthquake. Up to 60% of the system load may be interrupted immediately following the initial shock. According to representatives of Southern California Edison Company, the electrical power will not be rerouted and will be lost for an undefined period of time. Much of the imported power is expected to be lost. In some areas of greatest shaking it should be anticipated that some of the distribution lines, both underground and surface, will be damaged. Much of the affected area may have service restored in days; damaged areas with underground distribution may require a longer time. Loss of Southern California Edison transmission lines is possible.

Fire Operations

Although total collapse of fire stations is not expected, possible disruption of utilities, twisted doors and loss of power can create major problems. Numerous fires due to disruption of power and natural gas networks can be expected. The area's water supply may be greatly impacted. Connections to major water sources, water mains and storage facilities may be damaged resulting in an unstable water supply for Fire and Rescue Operations. Fire and Rescue personnel will need to complete a preliminary assessment to determine and establish response and recovery needs. In addition, Fire and Rescue Operations may take days because of the disruption to the transportation corridors. The movement of department personnel and equipment may be very difficult.

Secondary responses by the fire service after assessment will be to accomplish search and rescue of trapped persons. Major problems the Fire Service should expect are loss of power and water, jammed doors, restricted mobility due to debris, possible loss of primary dispatch capability and delays in reaching maximum effectiveness due to personnel shortages.

Highways and Bridges

Damage to freeway systems is expected to be major. The 210 freeway travels from the north end of the City to the eastern border. There is also a small segment of the 134 freeway at the west end of town. Any inner surface transportation routes could be subject to delays and detours. A major portion of surface streets in the vicinity of freeways will be blocked due to collapsed overpasses. Many surface streets in the older central business districts will be blocked by debris from buildings, falling electrical wires and pavement damage.

Natural Gas Pipelines

Damage to pipeline facilities will consist primarily of (a) some isolated breaks in major transmission lines, and (b) innumerable breaks in mains and individual service connections within the distribution systems, particularly in the areas of intense ground shaking. These many leaks in the distribution system will affect a major portion of the urban areas, resulting in a loss of service for extended periods. Fires should be expected at the sites of a small percentage of ruptures both in the transmission lines and the distribution system. Transmission pipelines serving the general basin area are most vulnerable to damage.

Railroads

It is expected that 21 of the 59 route segments serving the Southern California region could be unavailable for post earthquake service; the 21 segments include all major connections with the north. The post earthquake capacity to serve the Los Angeles and Orange County areas would be very small - probably no more than 5 trains a day. This is a dramatic loss from the 120 to 140 trains per day that can currently enter the area. Many railroad bridges are susceptible to damage because of age, design and construction. Some lines could be blocked because of damage to freeway overpass structures.

Sanitation Systems

Many of the waste water treatment facilities could be out of service from 4 to 6 months depending on the damage caused by the severity of intensity and liquefaction. There is a limited volume of storage available in the waste water treatment plants; if the treatment facility cannot be restored before storage is exceeded, the waste water will require discharge with emergency chlorination to reduce health hazards. Overflow of sewage through manholes and from ponds can be expected due to breakage in mains and loss of power. As a result, there will be a danger of excessive collection of explosive gas in sewer mains, and flow of untreated sewage in some street gutters.

Water Supply

Two of the three major aqueducts serving Southern California are expected to be out of service from 3 to 6 months following the event; only the Colorado River Aqueduct is expected to remain in service. This indicates the imported water supply to Los Angeles County may be only partial for a 3 to 6 months period. Several ruptures are anticipated along the water pipelines in the County. Anticipated damage to reservoir outlet works could take weeks to repair. The majority of water wells are expected to be disabled by loss of electricity and the lack of backup power sources. In addition, shear forces could render about a third of the wells inoperative for an indefinite period. Many areas could be dependent on tanker trucks to provide for their basic needs.

Several ruptures are anticipated along the water pipelines in the County. Anticipated damage to reservoir outlet works could take weeks to repair.

The city's water supply in 2004 consisted of eight active deep wells located throughout the city and five connections with the Metropolitan Water District (MWD) of Southern California. The city has interconnection with seven other local water agencies that can supply water during emergencies, periods of supply shortage, or periods of high demand. Thirty seven percent (37%) of the water produced in 2004 was from groundwater wells, 62% was purchased from MWD and 1% was purchased from other agencies.

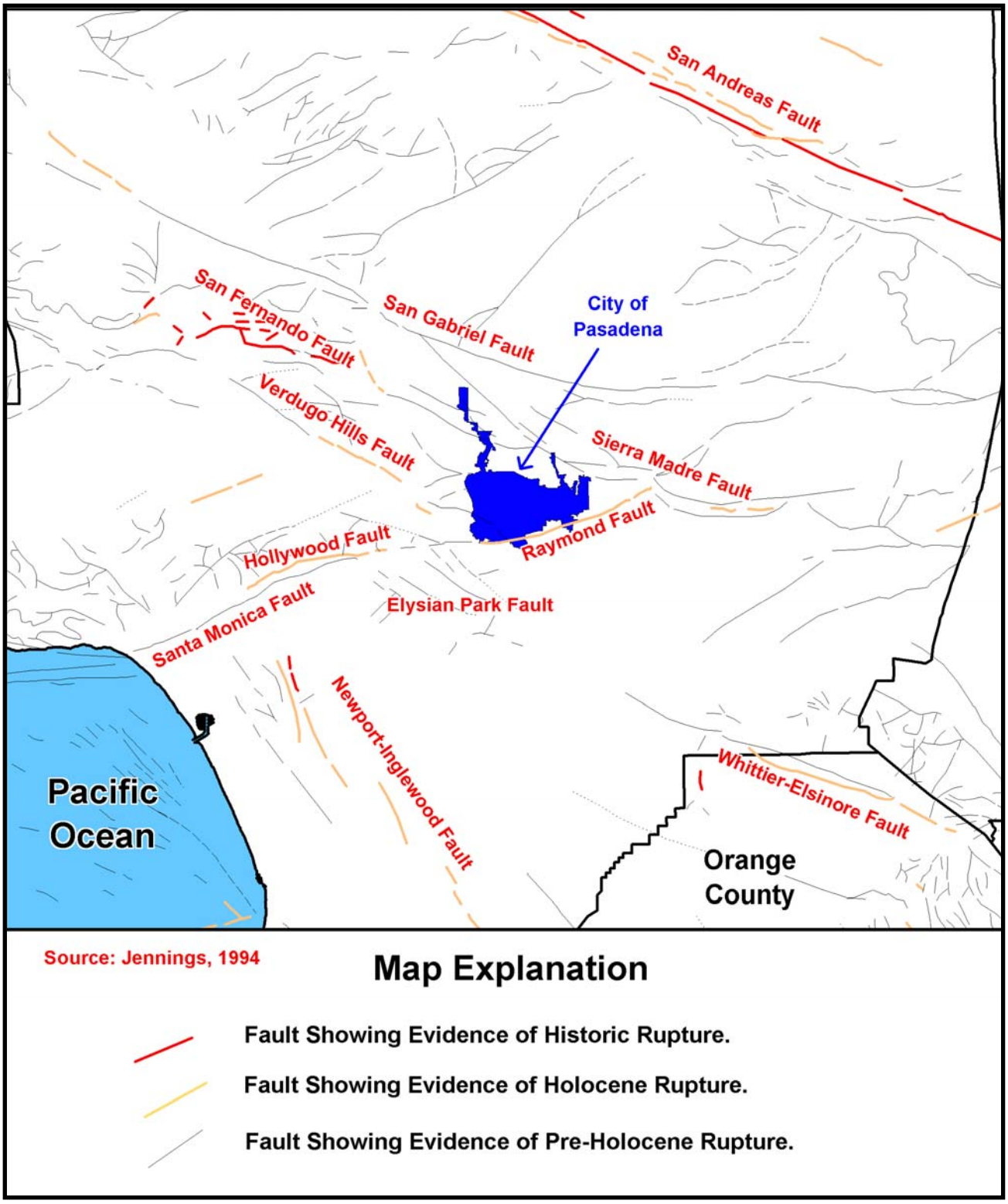
EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

Attachments:

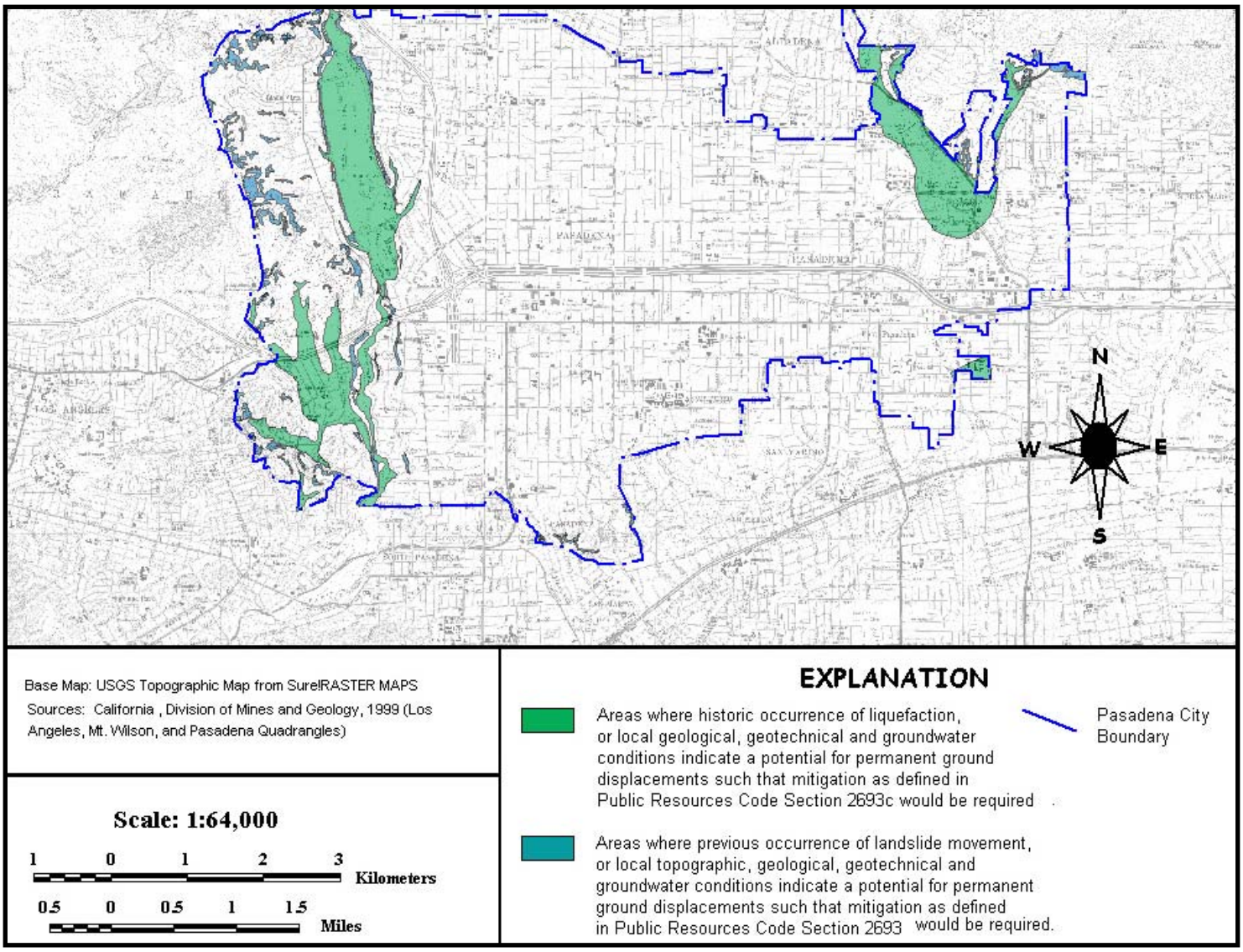
1. Pasadena Area Fault Map
2. City of Pasadena Liquefaction Potential Map
3. Abridged Modified Mercalli Intensity Scale
4. Richter Scale

ATTACHMENT 1, THREAT SUMMARY 1
EARTHQUAKE FAULT MAP



Source: Safety Element of the General Plan, Earth Consultants International, June 2002

ATTACHMENT2, THREAT SUMMARY 1
LIQUEFACTION MAP



Source: Safety Element of the General Plan, Earth Consultants International, June 2002

ATTACHMENT 3, THREAT SUMMARY 1

ABRIDGED MODIFIED MERCALLI INTENSITY SCALE

Intensity Value and Description	Average Peak Velocity (cm/sec)	Average Peak Acceleration (g = gravity)
I. Not felt except by a very few under especially favorable circumstances (I Rossi-Forel scale). Damage potential: None.	<0.1	<0.0017
II. Felt only by a few persons at rest, especially on upper floors of high-rise buildings. Delicately suspended objects may swing. (I to II Rossi-Forel scale). Damage potential: None.		
III. Felt quite noticeably indoors, especially on upper floors of buildings, but many people do not recognize it as an earthquake. Standing automobiles may rock slightly. Vibration like passing of truck. Duration estimated. (III Rossi-Forel scale). Damage potential: None.		
IV. During the day felt indoors by many, outdoors by few. At night some awakened. Dishes, windows, doors disturbed; walls make creaking sound. Sensation like a heavy truck striking building. Standing automobiles rocked noticeably. (IV to V Rossi-Forel scale). Damage potential: None. Perceived shaking: Light.	1.1 – 3.4	0.014 - 0.039
V. Felt by nearly everyone, many awakened. Some dishes, windows, and so on broken; cracked plaster in a few places; unstable objects overturned. Disturbances of trees, poles, and other tall objects sometimes noticed. Pendulum clocks may stop. (V to VI Rossi-Forel scale). Damage potential: Very light. Perceived shaking: Moderate.	3.4 – 8.1	0.039-0.092
VI. Felt by all, many frightened and run outdoors. Some heavy furniture moved, few instances of fallen plaster and damaged chimneys. Damage slight. (VI to VII Rossi-Forel scale). Damage potential: Light. Perceived shaking: Strong.	8.1 - 16	0.092 -0.18
VII. Everybody runs outdoors. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable in poorly built or badly designed structures; some chimneys broken. Noticed by persons driving cars. (VIII Rossi-Forel scale). Damage potential: Moderate. Perceived shaking: Very strong.	16 - 31	0.18 - 0.34
VIII. Damage slight in specially designed structures; considerable in ordinary substantial buildings with partial collapse; great in poorly built structures. Panel walls thrown out of frame structures. Fall of chimneys, factory stacks, columns, monuments, and walls. Heavy furniture overturned. Sand and mud ejected in small amounts. Changes in well water. Persons driving cars disturbed. (VIII+ to IX Rossi-Forel scale). Damage potential: Moderate to heavy. Perceived shaking: Severe.	31 - 60	0.34 - 0.65
IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb; great in substantial buildings with partial collapse. Buildings shifted off foundations. Ground cracked conspicuously. Underground pipes broken. (IX+ Rossi-Forel scale). Damage potential: Heavy. Perceived shaking: Violent.	60 - 116	0.65 – 1.24
X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed; ground badly cracked. Rails bent. Landslides considerable from river banks and steep slopes. Shifted sand and mud. Water splashed, slopped over banks. (X Rossi-Forel scale). Damage potential: Very heavy. Perceived shaking: Extreme.	> 116	> 1.24
XI. Few, if any, (masonry) structures remain standing. Bridges destroyed. Broad fissures in ground. Underground pipelines completely out of service. Earth slumps and land slips in soft ground. Rails bent greatly.		
XII. Damage total. Waves seen on ground surface. Lines of sight and level distorted. Objects thrown into air.		

Modified from Bolt (1993); Wald et al. (1999)

ATTACHMENT 4, THREAT SUMMARY 1
RICHTER SCALE

The Richter Scale is widely known, but often is a misunderstood scale. It is based on logarithms. Each whole number increase represents an increase in ground movement of 10 times. 7.0 represents ten times the ground movement of 6.0. 8.0 represents ten times the ground movement of a 7.0, and ten times ten, or 100 times the ground movement of a 6.0. However, for every whole number increase on the Richter Scale, there is a 31.5 increase in the amount of energy released. Therefore, a 7.0 earthquake (Richter) is 31.5 times as strong as a 60. An 8.0 is 31.5 times as strong, or 992.25 times as strong as a 6.0.

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THREAT ASSESSMENT 2

HAZARDOUS MATERIALS INCIDENT

GENERAL SITUATION

Because of Pasadena's close proximity to Interstate 210, 710, 110 and State Route 134, 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 are at higher risk. Jurisdictions near roadways that are frequently used for transporting hazardous materials and jurisdictions with industrial facilities that use, store, or dispose of such materials all have an increasing potential for major mishaps, as do jurisdictions crossed by certain railways, waterways, airways and pipelines.

Releases of explosive and highly flammable materials have caused fatalities and injuries, necessitated large-scale evacuations and destroyed millions of dollars worth of property. 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. Releases of hazardous chemicals have been especially damaging when they have occurred in highly populated areas and/or along heavily traveled transportation routes.

SPECIFIC SITUATION

Many forms of hazardous materials are present in Pasadena. They are present in permanent storage locations, roadway transport and at various industrial and commercial sites. Pasadena's proximity to its highway transportation routes, and various light industries, has a growing potential for serious hazardous materials incidents. Interstate 210, 710, 110 and State Route 134 are heavily traveled by trucks. They carry every conceivable type of hazardous material including gasoline, pesticides and compressed chlorine materials.

A hazardous materials release in the City of Pasadena would most likely involve either transportation of chemicals by truck, use of chemicals at a business or illegal dumping of chemical waste.

TRANSPORTATION ACCIDENTS

The greatest probability of a major hazmat incident is from a transportation accident. The amount of hazardous materials transported over roadways on a daily basis is unknown, but estimated to be steadily increasing as our economy grows. There is the potential for a hazardous materials incident almost anywhere on the highways and roads through out Pasadena. The greatest concern focuses on Interstate 210, 110 and

State Route 134. The most vulnerable areas along these routes are considered to be the on/off ramps and interchanges near the City.

Besides the immediate effect of a hazardous materials incident on scene, there are also ancillary effects such as the impact on waterways and drainage systems, and the evacuation of schools, business districts, and residential areas.

FIXED FACILITY

The second most likely serious hazmat threat exists from an accidental spill and/or incident at one of the facilities that manufacture, warehouse, and process toxic chemicals and/or generate hazardous waste materials within or next to City boundaries.

Although there are numerous facilities involved with hazardous materials throughout the City, they are less of a threat due to required plant contingency and evacuation plans. The Pasadena City Fire Department reviews these plans and makes sure they are in compliance with current laws and regulations. Refer to Attachment 1, Threat Summary 2, Hazardous Materials Sites for or an overview of hazardous materials sites in the City.

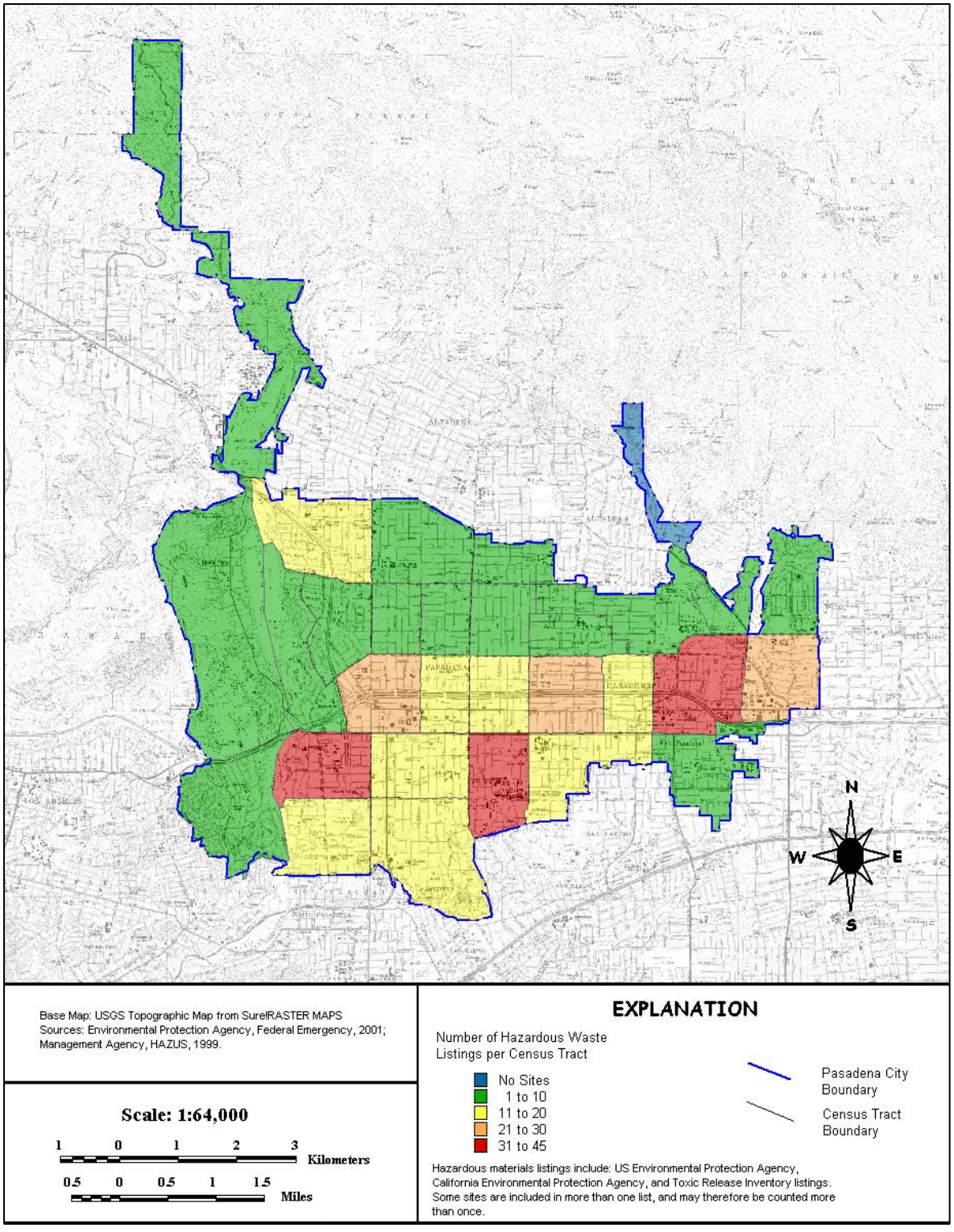
CLANDESTINE DUMPING

Clandestine dumping is the criminal act of disposing of toxic materials and hazardous waste on public or private property. As the costs and restrictions increase for legitimate hazardous waste disposal sites, it might be anticipated that illegal dumping of hazardous materials will increase proportionately. However, Pasadena has seen significant decreases in this activity over the past decade.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.** For specific information refer to the City of Pasadena's Hazardous Materials Plan with Pasadena Fire Department.

ATTACHMENT 1, THREAT SUMMARY 2
DISTRIBUTION OF HAZARDOUS MATERIALS SITES



Source: Safety Element of the General Plan, Earth Consultants International, June 2002

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THREAT ASSESSMENT 3

FLOODING

GENERAL SITUATION

The size and frequency of a flood in a particular area depends on a complex combination of conditions, including the amount, intensity and distribution of rainfall, previous moisture condition and drainage patterns.

The magnitude of a flood is measured in terms of its peak discharge, which is the maximum volume of water passing a point along a channel. Floods are usually referred to in terms of their frequency of occurrence, 50 or 100 years.

The primary effect of flooding is the threat to life and property. People and animals may drown; structures and their contents may be washed away or destroyed; roads, bridges, and railroad tracks may be washed out; and crops may be destroyed.

Floods may also create health hazards due to the discharge of raw sewage from damaged septic tank leach fields, sewer lines, and sewage treatment plants and due to flammable, explosive, or toxic materials carried off by flood waters. In addition, vital public services may be disrupted.

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 sand bagging 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 available at all. Flash flood warnings usually require immediate evacuation within the hour. On some occasions adequate warning may be impossible.

Once flooding begins, personnel will be needed to assist in rescuing persons trapped by flood waters, securing utilities, cordoning off flood areas, and controlling traffic. The Public Health Department would be actively involved in addressing the public health impact of resultant flood, such as disease and environmental health issues. These actions may over tax 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.

SPECIFIC SITUATION

The potential for flooding is not normally a major threat to the City of Pasadena. The city receives an average of 20 inches of rainfall annually, with most of it occurring between December and March (Source: http://cdec.water.ca.gov/). Heavy rains occur about every 30 years.

Areas subject to flooding drain either naturally into flood controls or are assisted by pumping stations designed to handle average and above average flows. Two main

north to south flowing stream systems drain in the Pasadena area. The Arroyo Seco Wash runs along the western edge of the City of Pasadena, while Eaton Canyon Creek and Eaton Wash drain the eastern side of the City.

Some flooding may occur in low-lying areas during heavy prolonged storms, or when storm drains are clogged with debris and unable to carry excess water away. Time should be available to organize forces, obtain needed supplies, equipment and outside aid.

An unusual number of brush fires in hillside areas may create the potential for mudslides if heavy rains arrive before the replanting has taken hold. Situations of this nature can usually be managed by warnings to the residents and making sandbags available in advance of the predicted heavy rainfall.

The City of Pasadena has participated in the National Flood Insurance Program since 1984. However, Flood Insurance Rate Maps (FIRMs) showing potential flood zones are not available for the City, and there are no flood prone areas recognized within the City. Furthermore, there are no published Flood Insurance Study (FIS) reports or floodplain maps available for the Arroyo Seco and Eaton Creek areas, which suggests that hydraulic studies for these drainages have not been performed.

EMERGENCY READINESS STAGES

Flood in the special risk areas can occur rapidly or slowly depending on the heaviness and severity of rainfall. Emergency preparedness will be based on three stages of response actions.

Stage I (Flood Watch)
Light to Moderate rain. Monitor storm to establish precise nature of flood risk. Alert key personnel. Ensure availability of Shelters (if it is later necessary to evacuate and look after local people). Ensure availability of sandbags at pre-designated locations

Stage II (Flood Warning or Urban and Small Stream Advisory)
Moderate to heavy rain. Monitor storm constantly to establish precise nature of flood risk and evolving situation. Establish liaison with all emergency services agencies and consider whether to set up Emergency Operations Center. Deploy staff to risk areas to monitor river levels. If needed alert staff to open shelters. Deploy reserve sand bags. Post flood warnings in affected areas.

Stage III (Flood Statement)
Continuation of heavy rain. Threat to private property and persons. Areas should be evacuated. In addition to the Flood Warning activities, open shelters, assist with evacuations of flooded areas, deploy staff to assist in spreading flood warnings, liaison with media to pass on important information.

EVACUATION ROUTES

It is expected that most major streets will be open. As such, evacuation should be easily facilitated. Other pertinent information relating to evacuation operations are Part Two, Operations Section.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

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THREAT ASSESSMENT 4

DAM FAILURE

GENERAL SITUATION

Dam failures can result from a number of natural or manmade causes such as earthquakes, erosion of the face or foundation, improper siting, rapidly rising flood waters, and structural/design flaws. There are three general types of dams: earth and rockfill, concrete arch or hydraulic fill, and concrete gravity. Each of these types of dams has different failure characteristics.

A dam failure will cause loss of life, damage to property, and other ensuing hazards, as well as the displacement of persons residing in the inundation path. Damage to electric transmission lines could impact life support systems in communities outside the immediate hazard areas. A catastrophic dam failure, depending on size of dam and population downstream, could exceed the response capability of local communities. Damage control and disaster relief support would be required from other local governmental and private organizations, and from the state and federal governments. Mass evacuation of the inundation areas would be essential to save lives, if warning time should permit. Extensive search and rescue operations may be required to assist trapped or injured persons. Emergency medical care, food, and temporary shelter would be required for injured or displaced persons. Identification and burial of many dead persons would pose difficult problems; public health would be a major concern. Many families would be separated, particularly if the failure should occur during working hours.

These and other emergency/disaster operations could be seriously hampered by the loss of communications, damage to transportation routes, and the disruption of public utilities and other essential services. Governmental assistance could be required and may continue for an extended period. Actions would be required to remove debris and clear roadways, demolish unsafe structures, assist in reestablishing public services and utilities, and provide continuing care and welfare for the affected population including, as required, temporary housing for displaced persons.

SPECIFIC SITUATION

Pasadena lies in the inundation path of two dams: the Devils Gate Reservoir and the Eaton Canyon Reservoir. These dams are owned by the Los Angeles County Department of Power and Water, and are located along the Arroyo Seco and Eaton Canyon Creek tributary stream systems, respectively.

In the unlikely event of a dam failure involving any of these dams, a portion of the city could be affected.

Devils Gate Dam

This dam is a concrete gravity dam, arched in plan, with a permanent concrete face that was placed in 1948. More recently, between February 1996 and December 1997, the dam underwent an extensive rehabilitation project. Based on information provided by a spokesperson for the Water Resources Division of the Los Angeles County Department of Public Works, the modifications made to the dam include:

- Placement of a mass concrete gravity buttress on the downstream face of the dam to stabilize the dam to meet the current earthquake standards.

- Raising, by 5 feet, and strengthening of the upstream parapet wall to safely pass the maximum flood of 33,690 cubic feet per second (cfs) at the reservoir level elevation of 1074.7 feet.

- Construction of a grout curtain at the upstream heel of the dam to reduce uplift pressures acting on the base of the dam and increase the sliding stability of the dam.

- Construction of a 210-foot side channel ported ogee spillway headworks structure and 270-foot long chute. The existing spillway was lowered 14 feet and straightened to reduce cross-waves and associated effects. A flip bucket was constructed at the end of the chute to direct discharges beyond the canyon face to the center of the canyon floor. The alluvium under the spillway headworks was removed, mixed with cement, and replaced. Rock tendons were installed to provide additional stability for the headworks structure.

- Construction a new single span bridge over the spillway.

- Construction an earthfill closure berm westerly of the dam and a mechanically stabilized earth spillway approach wall.

The reservoir covers an area of 153 acres, and has a capacity of at least 3,540 acre-feet (taking into account the 5-foot increase in height of the parapet wall).

The flood inundation path available from the California Division of Dam Safety is shown on Attachment 1, Threat Assessment 4, Dam Inundation Map. The map shows that, should this dam fail catastrophically, the floodway of Arroyo Seco would contain most of the water. Since this area is largely undeveloped, and used primarily for recreational purposes, the risk posed by this hazard could be considered low. Nevertheless, the catastrophic release of water could have a significant human impact if the area along the inundation pathway, such as the Rose Bowl, is being used for a special event, and hundreds to thousands of people are in the area at the time. Significantly, the inundation pathway shown on the Dam Inundation Map dates to 1973 and may therefore not be representative of the more recent changes made to the dam. It is unclear whether a new inundation pathway map is going to be developed by or for the LACDPW. Raising of the parapet wall by 5 feet suggest that more water can be stored in the reservoir, if there was a need to do so. Therefore, if the dam failed while the reservoir was full, it would certainly have the potential to impact a larger area than that

shown on the map. Nevertheless, the reservoir is most often only partly full, so the risk is smaller than suggested.

Eaton Wash Dam
The Eaton Wash dam, although rarely filled, is an earthfill – clay core dam that was completed in 1936. The reservoir covers an area of 54 acres, and has a capacity of 721 acre-feet. The flood inundation path, should the dam fail, is shown on Attachment 1, Threat Assessment 4, Dam Inundation Map.

In its southern reaches, the inundation pathway for Eaton Wash dam covers developed areas, including grounds of the Pasadena Unified School District, and numerous sites using or storing hazardous materials.

Failure of these dams during a catastrophic event, such as a severe earthquake, is considered a very unlikely event. Due to the method of construction of these dams, they have performed well in earthquakes; and failure is not expected to occur.

EVACUATION ROUTES

Pertinent information that relates to evacuation operations are included in **Part Two, Operations Section.**

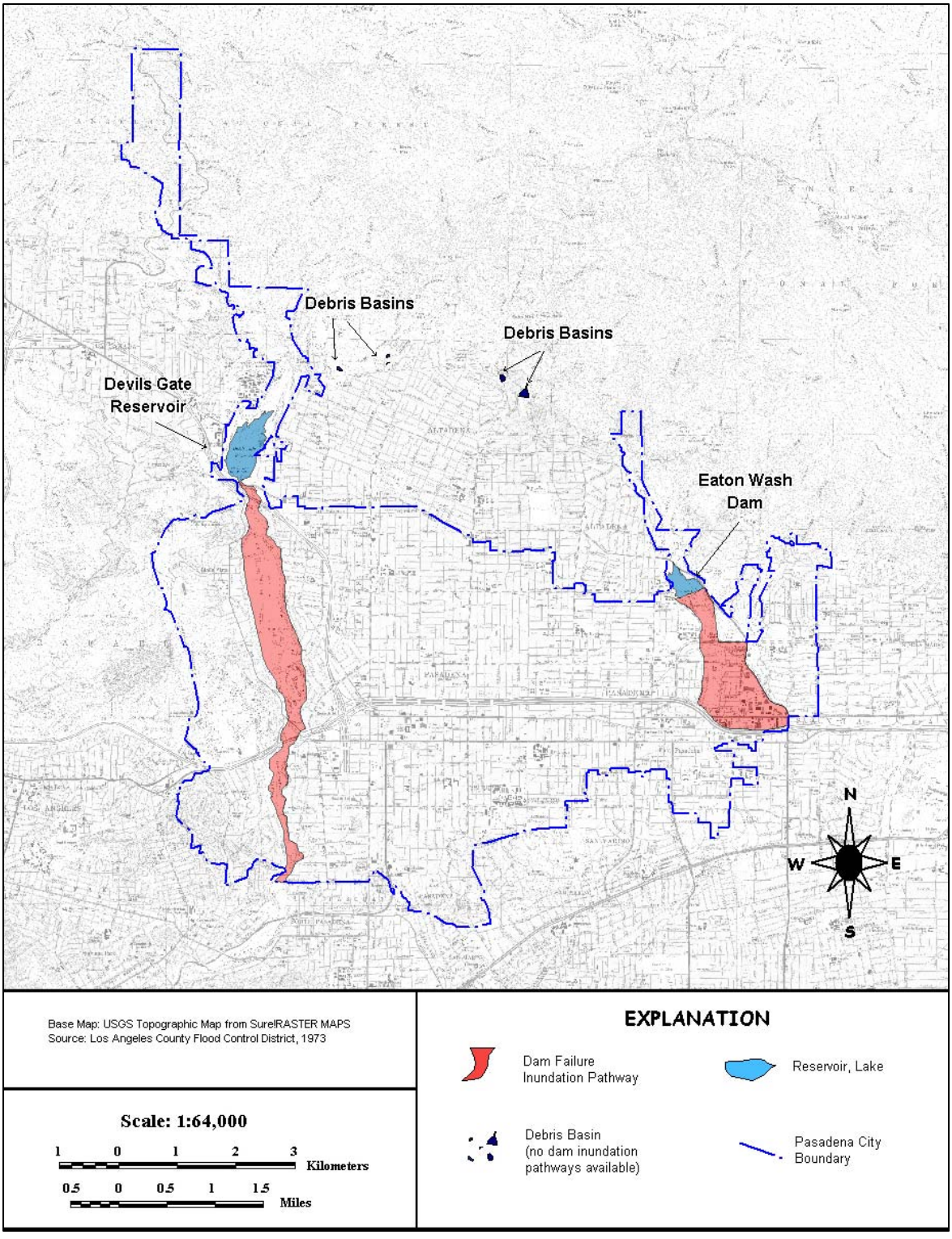
EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

Attachment:

1. Dam Inundation Map

ATTACHMENT 1, THREAT SUMMARY 4
DAM INUNDATION MAP



Source: Safety Element of the General Plan, Earth Consultants International, June 2002

THREAT ASSESSMENT 5
FIRE

GENERAL SITUATION

Due to its weather, topography, and native vegetation, the entire southern California area is at risk from wildland fires. The extended droughts characteristic of California's Mediterranean climate result in large areas of dry vegetation that provide fuel for wildland fires. Furthermore, the native vegetation typically has a high oil content that makes it highly flammable. The area is also intermittently impacted by Santa Ana winds, the hot, dry winds that blow across southern California in the spring and late fall.

A wildfire that consumes thousands of acres of vegetated property can overwhelm local emergency response resources. Often, when a wildland fire encroaches onto the built environment, multiple ignitions develop as a result of "branding", the term for wind transport of burning cinders over a distance of a mile or more. If ignited structures sustain and transmit the fire from one building to the next, a catastrophic fire can ensue. Insurance carries consider fire a catastrophe if it triggers at least $25 million in claims or more than 1,000 individual claims. The Oakland Hills firestorm of October 1991 was such an event. Firestorms, especially in areas of wildland-urban interfaces can be particularly dangerous and complex, posing a severe threat to public and firefighter safety, and causing devastating losses of both life and property. Continuous planning, preparedness, and education are required to reduce the fire hazard potential, and to limit the destruction caused by fires.

SPECIFIC SITUATION

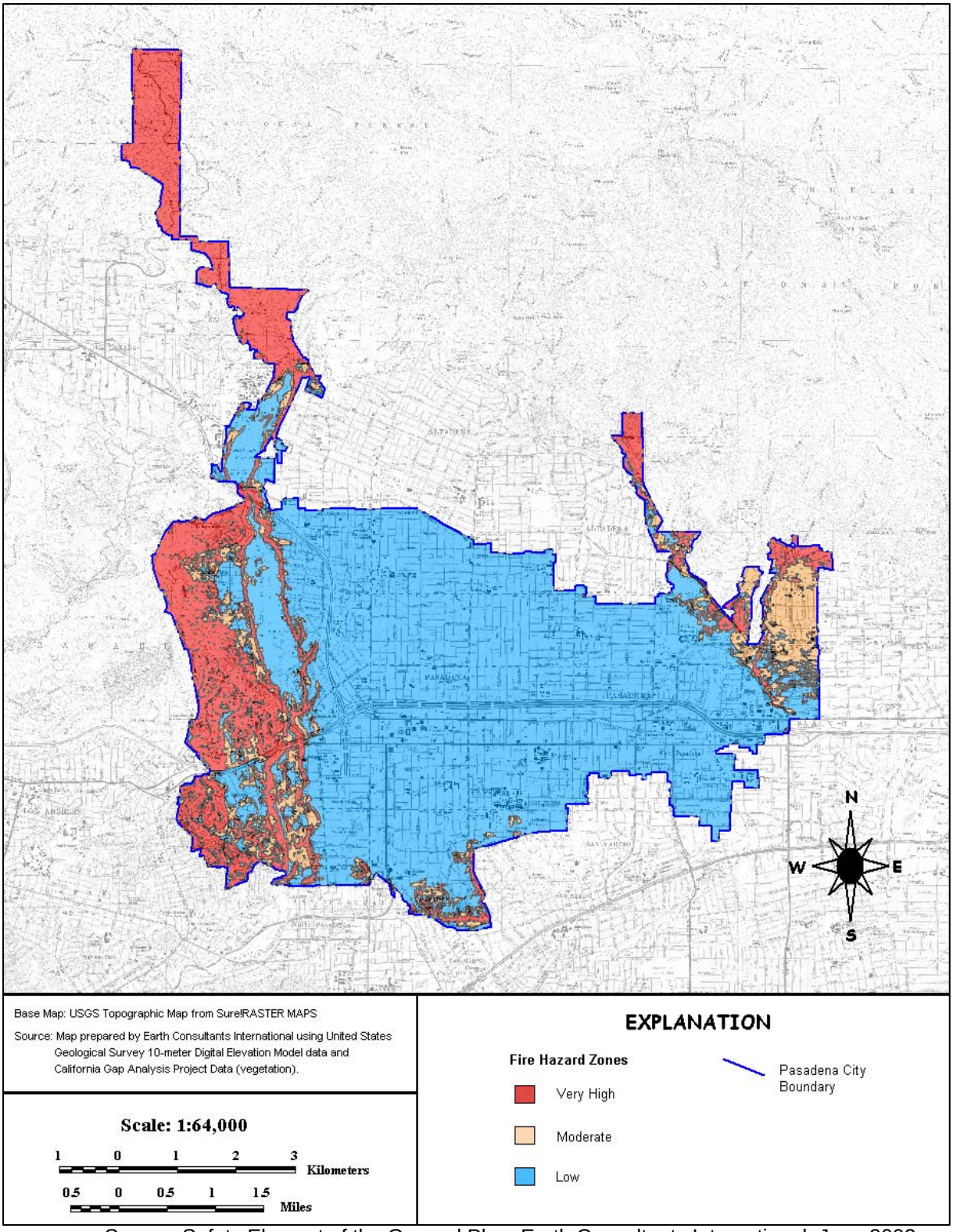
Wildfire hazard areas are commonly identified in regions of the wildland/urban interface. Ranges of the wildfire hazard are further determined by the ease of fire ignition due to natural or human conditions and the difficulty of fire suppression. The wildfire hazard is also magnified by several factors related to fire suppression/control such as the surrounding fuel load, weather, topography and property characteristics. Generally, hazard identification rating systems are based on weighted factors of fuels, weather and topography. The City of Pasadena is vulnerable to very high fire hazard areas. Refer to Attachment 1, Threat Assessment 5, Fire Hazard Map.

EMERGENCY RESPONSE ACTIONS

Emergency response actions associated with the above situations are presented in **Checklist Actions in Part Two of this Plan.**

Attachment:
1. Fire Hazard Map

ATTACHMENT 1, THREAT SUMMARY 5
FIRE HAZARD MAP



Source: Safety Element of the General Plan, Earth Consultants International, June 2002

THREAT ASSESSMENT 6-A

TRANSPORTATION: MAJOR AIR CRASH

GENERAL SITUATION

A major air crash that occurs in a populated residential area can result in considerable loss of life and property. The impact of a disabled aircraft as it strikes the ground creates the likely potential for multiple explosions, resulting in intense fires. Regardless of where the crash occurs, the explosions and fires have the potential to cause injuries, fatalities and the destruction of property at and adjacent to the impact point. The time of day when the crash occurs may have a profound affect on the number of dead and injured. Damage assessment and disaster relief efforts associated with an air crash incident will require support from other local governments, private organizations and in certain instances from the state and federal governments.

It can be expected that few, if any, airline passengers will survive a major air crash. The intense fires, until controlled, will limit search and rescue operations. Police barricades will be needed to block off the affected area. The crowds of onlookers and media personnel will have to be controlled. Emergency medical care, food and temporary shelter will be required by injured or displaced persons. Many families may be separated, particularly if the crash occurs during working hours; and a locator system should be established at a location convenient to the public. Investigators from the National Transportation and Safety Board and the Los Angeles County Coroners Office will have short-term jurisdiction over the crash area and investigations will be completed before the area is released for clean up. The clean-up operation may consist of the removal of large debris, clearing of roadways, demolishing unsafe structures and towing of demolished vehicles.

It can be anticipated that the mental health needs of survivors and the surrounding residents will greatly increase due to the trauma associated with such a catastrophe. A coordinated response team, comprised of mental health professionals, should take a proactive approach toward identifying and addressing mental health needs stemming from any traumatic disaster. The Crisis Intervention Teams from Burbank, Glendale and Pasadena Fire Departments will assess the initial need.

It is impossible to totally prepare, either physically or psychologically, for the aftermath of a major air crash. However, since Southern California has become one of the nation's most overcrowded air spaces, air crash incidents are no longer a probability but a reality. Therefore, air crash incidents must be included among other potential disasters.

SPECIFIC SITUATION

The City of Pasadena is located in the southeastern portion of Los Angeles County. The City is comprised of residential, commercial and industrial areas. The skies above Pasadena are occupied by aircraft originating and departing from a number of airports located in Southern California. The airports nearest to Pasadena which handle the greatest amount of air traffic are as follows:

The **Los Angeles International Airport (LAX)**—is the fourth busiest international airport in the world. Planes arrive and depart at a rate of one per minute. LAX reported 54,970,030 flights in 2003. These flights included International and Domestic flights.

The **Van Nuys Airport**, located in the heart of the San Fernando Valley, is ranked as the world's busiest general aviation airport with averages of nearly one-half million takeoffs and landings annually, with 466,449 total operations in 2003.

The **Burbank Airport**—It is ranked 53rd busiest airport nationally in terms of air traffic that it handles. Burbank Airport reported 178,079 flights in 2003. Also, airport hours of operation are restricted to 7:00 AM to 10:00 PM.

The **Long Beach Airport** –It is ranked as one the busiest general aviation airport. Planes arrive and depart at a rate of 1.5 every two minutes. The Airport handles 39 daily commercial flights. In 2004, nearly 3 million passengers landed or departed from this airport.

The **John Wayne Airport** – It is ranked 10th nationally in terms of air traffic. Home base to 573 private and corporate aircraft, general aviation activity accounts for approximately 71 percent of the Airport's 249,000 total takeoffs and landings.

The **Ontario International Airport** –Ontario International Airport (ONT) is a medium-hub, full-service airport with commercial jet service to major U.S. cities and through service to many international destinations. The airport is the centerpiece of one of the fastest-growing transportation regions in the United States. Passenger traffic at ONT has been increasing steadily for the past 10 years. In 2003, 6.5 million passengers used the airport and 571,892 tons of air freight were shipped.

Aircraft flying over Pasadena are located in the Los Angeles Terminal Control Area (TCA). The TCA is airspace restricted to large, commercial airliners. Each TCA has an established maximum and minimum altitude in which a large aircraft must travel. Smaller aircraft desiring to transit the TCA may do so by obtaining Air Traffic Control clearance. The aircraft may then proceed to transit when traffic conditions permit. Aircraft departing from other than LAX, whose route of flight would penetrate the TCA, are required to give this information to Air Traffic Control on appropriate frequencies. Pilots operating small aircraft often rely on geographical landmarks, rather than charts, to indicate geographical landmarks of the Southern California basin, he/she may misinterpret a particular landmark and inadvertently enter the restricted TCA airspace. This misunderstanding may result in a mid-air collision.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

Additional aircraft emergency information can be found in the City of Pasadena, Airport Emergency Plan.

Attachment 1 – Map of Airport Locations

ATTACHMENT 1, THREAT ASSESSMENT 6A
MAP OF LOCAL AIRPORTS

THREAT ASSESSMENT 6-B

TRANSPORTATION: TRAIN INCIDENT/DERAILMENT

GENERAL SITUATION

The Metro Gold Line Construction Authority was formed in 1999 to design and build a light rail line from Los Angeles to Montclair. The first phase of the project was fully funded with state and local money at the beginning of construction and was completed on time and under budget. The first phase connects the cities of Los Angeles, South Pasadena and Pasadena. The Metro Gold Line links commuters to the regional transportation network at Union Station in downtown Los Angeles and opened to the public on July 26, 2003. More than 150,000 riders boarded Metro Gold Line trains during its first weekend of operation.

SPECIFIC SITUATION

Phase I of the Gold Line Light Rail project extends 13.7 miles from the southern terminus at Union Station in downtown Los Angeles to the northern terminus in east Pasadena and runs parallel to the 210 freeway. Phase I service includes 13 stations, six of which are located within Pasadena City limits:

- East Pasadena (Sierra Madre Villa Station)
- Allen Avenue/College
- Lake Avenue
- Old Pasadena/Civic Center (Memorial Park)
- Del Mar
- Fillmore

Approximately 12,500 daily passengers use The Gold Line Light Rail.

Safety issues include station accidents, boarding and disembarking accidents, and right-of-way accidents.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

Attachment 1 – Light Rail Transportation Map

ATTACHMENT 1, THREAT ASSESSMENT 6B, LIGHT RAIL TRANSPORTATION MAP

THREAT ASSESSMENT 6-C

TRANSPORTATION: TRUCKING INCIDENT

GENERAL SITUATION

A major truck incident that occurs in a populated industrial area or residential area can result in considerable loss of life and property. When a truck is involved in an accident, there is no longer control as to the direction the truck will travel. Potential hazards could be overturned tank trailers, direct impact either into a residence or industrial building, or entering into the normal flow of traffic.

Each of these hazards encompass many threats, such as hazardous materials incident, fire, severe damage to either adjacent buildings or vehicles, and loss of life of pedestrians or those in either the adjacent buildings or vehicles.

SPECIFIC SITUATION

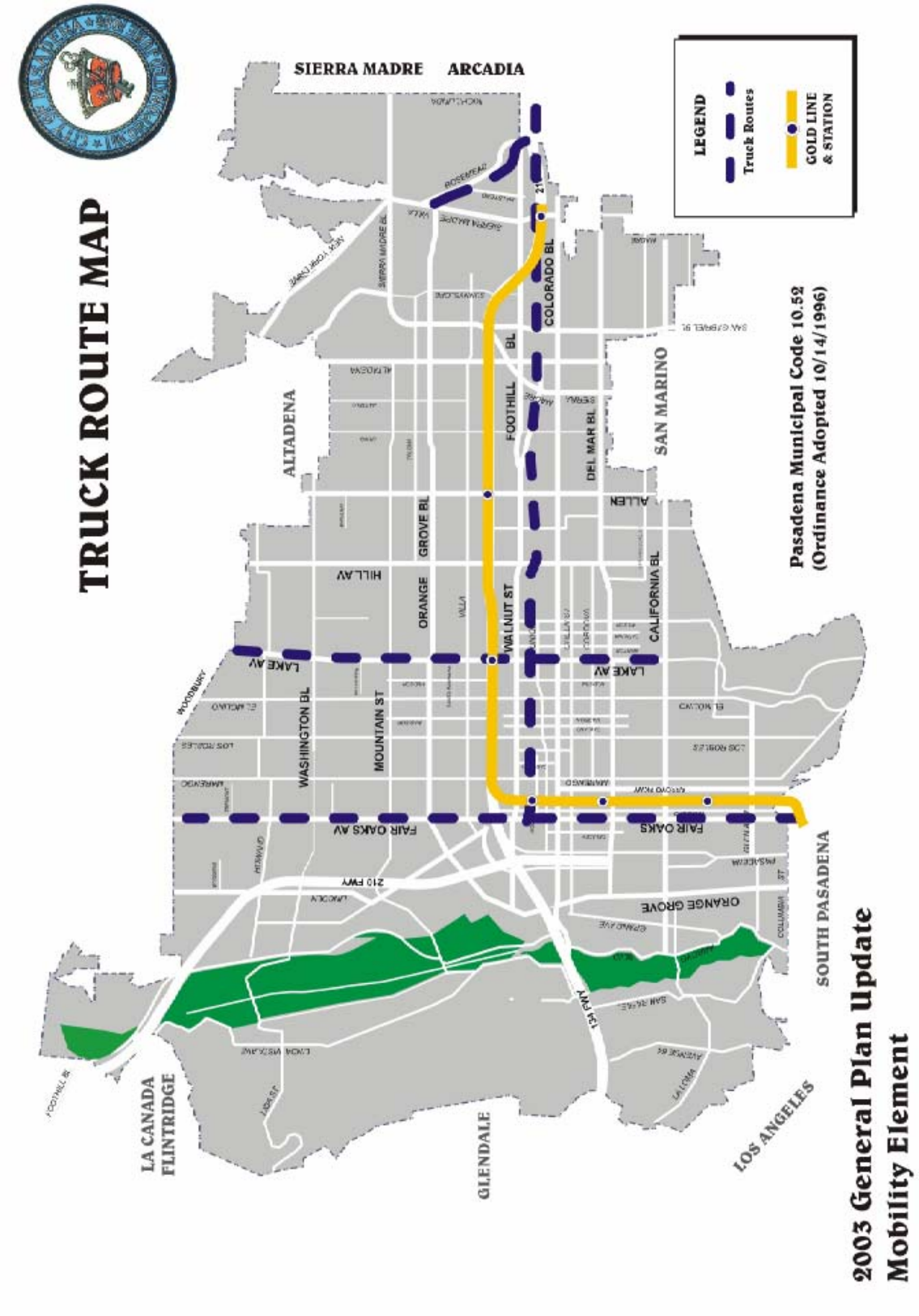
The City is served by the 210, 134, 710 and 110 freeways, and the major arterial highways are Fair Oaks Avenue, Lake Avenue, and Los Robles Avenue, which run north to south and Colorado Blvd., Walnut Street, Del Mar Boulevard, and Green Street, which run east to west.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

Attachment:
1. Truck Transportation Corridor Map

ATTACHMENT 1, THREAT ASSESSMENT 6C
TRUCK TRANSPORTATION CORRIDOR MAP



THREAT ASSESSMENT 7

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 referred to as civil unrest. Civil unrest can be the result of long-term disfavor with authority. Civil unrest is usually noted by the fact that normal on-duty police and safety forces cannot adequately deal with the situation until additional resources can be acquired or it may require deeper long term solutions to prevent the problem from happening again in the future.

SPECIFIC SITUATION

Situations of Civil Unrest may include, but not be limited to:

- Neighborhood problems whether or not stemming from extended social situations.
- Problems with authority and other causes of unrest.
- Problems in the school system, on and off campus - problems that often stem from individuals' and groups' inability to interact in an appropriate social manner.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

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THREAT ASSESSMENT 8

TERRORISM

GENERAL SITUATION

In the wake of the 1993 World Trade Center bombing in New York and the Oklahoma City bombing in 1995, terrorism became a serious concern for emergency management, emergency responders, and the public at large. However, the 2001 attack on the World Trade Center and the Pentagon has elevated our concern about terrorism to a level we never imagined, and requires us to be prepared to respond to situations that go beyond the terrorist incident scenarios that we are familiar with. FEMA's *Managing Terrorists Incidents, Interim Planning Guide For State and Local Governments*, July 2002, was referenced greatly for this section.

Terrorism is defined as the use of fear or intimidation, usually political goals. Terrorism is a crime where the threat of violence is often as effective as the commission of the violent act itself. Terrorism affects us through fear, physical injuries, economic losses, psychological trauma, and erosion of faith in government. Terrorism is not an ideology. Terrorism is a strategy used by individuals or groups to achieve their political goals.

Terrorists espouse a wide range of causes. They can be for or against almost any issue, religious belief, political position, or group of people of one national origin or another. Because of the tremendous variety of causes supported by terrorists and the wide variety of potential targets, there is no place that is truly safe from terrorism. Throughout California there is nearly limitless number of potential targets, depending on the perspective of the terrorist. Some of these targets include: government offices, pregnancy centers, religious facilities, public places (such as shopping centers), schools, power plants, refineries, utility infrastructures, water storage facilities, dams, private homes, prominent individuals, financial institutions and other businesses.

There are unique challenges to a terrorist event involving a Weapon of Mass Destruction (WMD), such as a nuclear, radiological, biological, explosive or chemical weapon. As in all incidents, WMD incidents may involve mass casualties and damage to buildings or other types of property. However, there are a number of factors surrounding WMD incidents that are unlike any other type of incidents that must be taken into consideration when planning a response.

- The situation may not be recognizable until there are multiple casualties or a secondary event occurs that indicates that the first was not an accident. Most chemical and biological agents are not detectable by conventional methods used for explosives and firearms. Most agents can be carried in containers that look like ordinary items.

- There may be multiple events (i.e., one event in an attempt to influence another event's outcome).
- Responders are placed at a higher risk of becoming casualties because agents are not readily identifiable. Responders may become contaminated before recognizing the agents involved. First responders may, in addition, be targets for secondary releases or explosions.

- The location of the incident will be treated as a crime scene. As such, preservation and collection of evidence is critical. Therefore, it is important to ensure that actions on-scene are coordinated between response organizations to minimize any conflicts between law enforcement authorities, who view the incident as a crime scene, and other responders, who view it as a hazardous materials or disaster scene.

- In addition to local response coordination challenges, the WMD incident will add a myriad of state and federal agencies into the system. Coordination and communication issues between all response levels (local, state, and federal) will constantly need to be assessed.

- Contamination of critical facilities and large geographic areas may result. Victims may carry an agent unknowingly to public transportation facilities, businesses, residences, doctors' offices, walk-in medical clinics, or emergency rooms because they don't realize that they are contaminated. First responders may carry the agent to fire or precinct houses, hospitals, or to the locations of subsequent calls.

- The scope of the incident may expand geometrically and may affect mutual aid jurisdictions. Airborne agents flow with the air current and may disseminate via ventilation systems, carrying the agents far from the initial source.

- There will be a stronger reaction from the public than with other types of incidents. The deliberate destruction of life and property is both horrific and difficult to process, and the fear of additional attacks as well as the unknown makes the public's response more severe. Also, the thought of exposure to a chemical or biological agent or radiation evokes terror in most people.

- Time is working against responding elements. The incident can expand geometrically and very quickly. In addition, the effects of some chemicals and biological agents worsen over time.

- Support facilities, such as utility stations and 911 centers along with critical infrastructures, are at risk as targets.

- Specialized State and local response capabilities may be overwhelmed.

TERRORISM HAZARDS

Terrorism hazards may be WMD (including conventional explosives, secondary devices, and combined hazards) or other means of attack (including low-tech devices and delivery, attacks on infrastructure, and cyber terrorism).

WMD Hazard Agents

Weapons of mass destruction are defined as any weapon that is designed or intended to cause death or serious bodily injury through the release, dissemination, or impact of toxic or poisonous chemicals; disease organisms; radiation or radioactivity; or explosion or fire. At least two important considerations distinguish these hazards from other types of terrorist tools. First, in the case of chemical, biological, and radioactive agents, their presence may not be immediately obvious, making it difficult to determine when and where they have been released, who has been exposed, and what danger is present for first responders and medical technicians. Second, although there is a sizable body of research on battlefield exposures to WMD agents, there is limited scientific understanding of how these agents affect civilian populations.

Chemical

Chemical agents are intended to kill, seriously injure, or incapacitate people through physiological effects. A terrorist incident involving a chemical agent will demand immediate reaction from emergency responders—fire departments, police, hazardous materials (HazMat) teams, emergency medical services (EMS), and emergency room staff—who will need adequate training and equipment. Hazardous chemicals, including industrial chemicals and agents, can be introduced via aerosol devices (e.g., munitions, sprayers, or aerosol generators), breaking containers, or covert dissemination. Such an attack might involve the release of a chemical warfare agent, such as a nerve or blister agent or an industrial chemical, which may have serious consequences. Some indicators of the possible use of chemical agents are listed in Table 1. Early in an investigation, it may not be obvious whether an outbreak was caused by an infectious agent or a hazardous chemical; however, most chemical attacks will be localized, and their effects will be evident within a few minutes. There are both persistent and nonpersistent chemical agents. Persistent agents remain in the affected area for hours, days, or weeks. Nonpersistent agents have high evaporation rates, are lighter than air, and disperse rapidly, thereby losing their ability to cause casualties after 10 to 15 minutes, although they may be more persistent in small, unventilated areas.

Table 1. General Indicators of Possible Chemical Agent Use

Stated Threat to Release a Chemical Agent
Unusual Occurrence of Dead or Dying Animals • For example, lack of insects, dead birds
Unexplained Casualties • Multiple victims • Surge of similar 911 calls • Serious illnesses • Nausea, disorientation, difficulty breathing, or convulsions • Definite casualty patterns
Unusual Liquid, Spray, Vapor, or Powder • Droplets, oily film • Unexplained odor • Low-lying clouds/fog unrelated to weather
Suspicious Devices, Packages, or Letters • Unusual metal debris • Abandoned spray devices • Unexplained munitions

Biological

Recognition of a biological hazard can occur through several methods, including identification of a credible threat, discovery of bioterrorism evidence (devices, agent, clandestine lab), diagnosis (identification of a disease caused by an agent identified as a possible bioterrorism agent), and detection (gathering and interpretation of public health surveillance data).

When people are exposed to a pathogen such as anthrax or smallpox, they may not know that they have been exposed, and those who are infected, or subsequently become infected, may not feel sick for some time. This delay between exposure and onset of illness, the incubation period, is characteristic of infectious diseases. The incubation period may range from several hours to a few weeks, depending on the exposure and pathogen. Unlike acute incidents involving explosives or some hazardous chemicals, the initial detection and response to a biological attack on civilians is likely to be made by direct patient care providers and the public health community.

Terrorists could also employ a biological agent that would affect agricultural commodities over a large area (e.g., wheat rust or a virus affecting livestock), potentially devastating the local or even national economy.

Responders should be familiar with the characteristics of the biological agents of greatest concern for use in a bioterrorism event. Unlike victims of exposure to chemical or radiological agents, victims of biological agent attack may serve as carriers of the disease with the capability of infecting others (e.g., smallpox, plague). Some indicators of biological attack are given in Table 2.

Table 2. General Indicators of Possible Biological Agent Use

Stated Threat to Release a Biological Agent
Unusual Occurrence of Dead or Dying Animals
Unusual Casualties • Unusual illness for region/area • Definite pattern inconsistent with natural disease
Unusual Liquid, Spray, Vapor, or Powder • Spraying; suspicious devices, packages, or letters

Nuclear/Radiological

The difficulty of responding to a nuclear or radiological incident is compounded by the nature of radiation itself. In an explosion, the fact that radioactive material was involved may or may not be obvious, depending upon the nature of the explosive device used. The presence of a radiation hazard is difficult to ascertain, unless the responders have the proper detection equipment and have been trained to use it properly. Although many detection devices exist, most are designed to detect specific types and levels of radiation and may not be appropriate for measuring or ruling out the presence of radiological hazards. Table 3 lists some indicators of a radiological release.

Table 3. General Indicators of Possible Nuclear Weapon/Radiological Agent Use

Stated Threat to Deploy a Nuclear or Radiological Device
Presence of Nuclear or Radiological Equipment • Spent fuel canisters or nuclear transport vehicles
Nuclear Placards/Warning Materials Along with Otherwise Unexplained Casualties

Conventional Explosives and Secondary Devices

The easiest to obtain and use of all weapons is still a conventional explosive device, or improvised bomb, which may be used to cause massive local destruction or to disperse chemical, biological, or radiological agents. The components are readily available, as are detailed instructions on constructing such a device. Improvised explosive devices are categorized as being explosive or incendiary, employing high or low filler explosive materials to explode and/or cause fires. Explosions and fires also can be caused by projectiles and missiles, including aircraft used against high-profile targets such as buildings, monuments, and special events. Bombs and firebombs are cheap and easily constructed, involve low technology, and are the terrorist weapon most likely to be encountered. Large, powerful devices can be outfitted with timed or remotely triggered detonators and can be designed to be activated by light, pressure, movement, or radio transmission. The potential exists for single or multiple bombing incidents in single or multiple municipalities. Historically, less than five percent of actual or attempted bombings were preceded by a threat. Explosive materials can be employed covertly with little signature and are not readily detectable. Secondary explosive devices may also be used as weapons against responders and the public in coincident acts. Other diversionary events or attacks could also be aimed at responders.

Combined Hazards

WMD agents can be combined to achieve a synergistic effect—greater in total effect than the sum of their individual effects. They may be combined to achieve both immediate and delayed consequences. Mixed infections or toxic exposures may occur, thereby complicating or delaying diagnosis. Casualties of multiple agents may exist; casualties may also suffer from multiple effects, such as trauma and burns from an explosion, which exacerbate the likelihood of agent contamination. Attacks may be planned and executed so as to take advantage of the reduced effectiveness of protective measures produced by employment of an initial WMD agent. Finally, the potential exists for multiple incidents in single or multiple municipalities.

Other Terrorism Hazards

Planners also need to consider the possibility of unusual or unique types of terrorist attacks previously not considered likely.[1] Although it is not realistically possible to plan for and prevent every conceivable type of terrorist attack, planners should anticipate that future terrorism attempts could range from simple, isolated attacks to complex, sophisticated, highly coordinated acts of destruction using multiple agents aimed at one or multiple targets. Therefore, the plans developed for terrorist incidents must be broad in scope yet flexible enough to deal with the unexpected. These considerations are particularly important in planning to handle the consequences of attacks using low-tech devices and delivery, assaults on public infrastructure, and cyber terrorism, In these cases, the training and experience of the responders may be more important than detailed procedures.

Low-Tech Devices and Delivery

Planning for the possibility of terrorist attacks must consider the fact that explosives can be delivered by a variety of methods. Most explosive and incendiary devices used by terrorists would be expected to fall outside the definition of a WMD. Small explosive devices can be left in packages or bags in public areas for later detonation, or they can be attached directly to a suicide bomber for detonation at a time and place when and where the terrorist feels that maximum damage can be done. The relatively small size of these explosive devices and the absence of specific security measures in most areas make these types of terrorist attacks extremely difficult to prevent. Small explosive devices can also be brought onto planes, trains, ships, or buses, within checked bags or hand carried. Larger quantities of explosive materials can be delivered to their intended target area by means of car or truck bombs.

Infrastructure Attacks

Potential attacks on elements of the nation's infrastructure require protective considerations. Infrastructure protection involves proactive risk management actions taken to prevent destruction of or incapacitating damage to networks and systems that serve society, according to the 1997 report of the President's Commission on Critical Infrastructure Protection. This commission was formed in 1996 to evaluate the vulnerability to disruption of the nation's infrastructures, including electric power, oil and natural gas, telecommunications, transportation, banking and finance, and vital government services. The commission's report, issued in October 1997, concluded, "Waiting for disaster is a dangerous strategy. Now is the time to act to protect our future."

[1] Prior to the World Trade Center attack, the use of multiple commercial airliners with full fuel loads as explosive, incendiary devices in well-coordinated attacks on public and governmental targets, was not considered a likely terrorist scenario.

Cyber Terrorism
Cyber terrorism involves the malicious use of electronic information technology to commit or threaten to commit acts dangerous to human life, or against a nation's critical infrastructures in order to intimidate or coerce a government or civilian population to further political or social objectives (FBI NIPC, Congressional testimony, August 29, 2001). As with other critical infrastructure guidance, most cyber protection guidance focuses on security measures to protect computer systems against intrusions, denial of service attacks, and other forms of attack rather than addressing issues related to contingency and consequence management planning.

Unlike natural disasters, a disaster resulting from a terrorist incident is also a crime scene. Therefore, two response operations need to be managed simultaneously in the event of this type of incident. Previously these two operations were described in the California Terrorism Response Plan as: Crisis Management and Consequence Management, however, with the advent of Homeland Security Presidential Directive – 5 (HSPD-5), these two operations will now be treated as on single operation.

HSPD-5 says to prevent, prepare for, respond to, and recover from terrorist attacks, major disasters, and other emergencies, the United States Government shall establish a single, comprehensive approach to domestic incident management. The objective of the United States Government is to ensure that all levels of government across the Nation have the capability to work efficiently and effectively together, using a national approach to domestic incident management. In these efforts, with regard to domestic incidents, the United States Government treats crisis management and consequence management as a single, integrated function, rather than as two separate functions.

SPECIFIC SITUATION

In response to a growing concern about terrorism at the federal, state and local level, the City of Pasadena developed two working groups. One group is the Pasadena Response Team which addresses generic planning concerns and the other group is the Pasadena Operations Committee which deals with threat analysis and more specific issues and may also be activated during a threat/actual event.

The City developed a broad threat assessment of potential terrorist targets, threat elements and local response capabilities. This assessment is contained in a restricted use-planning document maintained by the Operations Committee and Response Team. The information contained in this document will be used as necessary during a threat situation or actual event. However, following is a general overview of potential terrorist targets in Los Angeles County and specifically Pasadena:

- Facilities that store, manufacture or transport hazardous materials
- US and State Highways
- Telecommunications facilities
- Federal, state, county and city offices
- Shopping Malls

- Medical Centers
- Schools, churches & religious centers
- Research Facilities
- Electrical Facilities and Power Plants
- Water and Wastewater Facilities, Dams
- Bridges and Overpasses

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

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THREAT ASSESSMENT 9

NATIONAL SECURITY EMERGENCY

GENERAL SITUATION

As a result of the recent restructuring of the Soviet Union, the likelihood of nuclear war is significantly reduced. Therefore, identifying likely targets in the event of a nuclear war is not pertinent. However, terrorist activities and radiological materials accidents are still likely. Terrorist activities could result in nuclear weapons being detonated.

The following is provided for information and planning purposes:

Air Burst

An air burst, by definition, is when a nuclear weapon is detonated and the fireball does not touch the surface of the earth. Usually, the weapon is set to detonate at a height of between 5,000 and 15,000 feet. Air bursts are generally selected for their capability to generate high over-pressure and shock effect over large areas, as well as to ignite fires for great distances. Neither radiation nor radioactive fallout is considered to be a significant factor in the event of an air burst.

Surface Burst

A nuclear detonation is considered to be a surface burst when the fireball generated touches the surface of the earth. Surface bursts could include water bursts, under-water bursts and underground bursts.

Surface bursts produce large amounts of radioactive fallout. Therefore, some targets may be selected not only for the purpose of destroying facilities, but to also use the downwind fallout to prevent access or restrict movement in large geographical areas.

Detonation of a nuclear bomb can produce various damaging effects. Included are blast and over-pressure, intense heat and light, nuclear radiation (fission and fusion), electromagnetic pulse, and for surface bursts, radioactive fallout.

Blast

When the weapon is detonated, a tremendous pressure is developed. This over-pressure rapidly expands outward in all directions, creating extremely high winds. The expansion continues until the over-pressure is reduced to normal pressure. The rapid outward expansion of air creates a vacuum which must equalize. The winds then reverse to the opposite direction and continue until the air pressure is equalized. Damage and injury are caused not only by the outward expansion phase of the wind and pressure, but also in the opposite direction when the air is rushing back to fill the vacuum. It is believed that an ordinary California home would be destroyed at about 1.5 to 2 psi, often 2 to 5 miles from the detonation.

NOTE: Over-pressure is rated in pounds per square inch (psi). Normal pressure at sea level is 14.7 pounds per square inch. Therefore, if the pressure is increased to 15.7 psi, the over-pressure would be 1 psi.

Thermal Radiation
A burst of intense light and heat. This phenomenon can initiate 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 many miles from the point of detonation. A one-megaton explosion can cause first-degree burns at distances of approximately 7 miles, second-degree burns at approximately 6 miles, and third- degree burns at approximately 5 miles from ground zero. Detonation of a single thermonuclear weapon could cause many thousands of burn casualties.

Initial Radiation
Defined as that radiation emitted during the first minute after detonation, it is comprised 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.

Fallout
Produced by surface debris drawn into and irradiated by the fireball, then rising into the atmosphere and eventually returning to earth. When a nuclear detonation occurs, fission products and induced radioactive material from the weapon casing and debris that was pulled up into the fireball returns to earth as fallout. A source of ionizing radiation, fallout may be deposited miles from the point of detonation and thus affect people otherwise safe from the other 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.

Electromagnetic Pulse (EMP)
Intense electric and magnetic fields that can damage unprotected electronic equipment. This effect is most pronounced in high altitude bursts (above 100,000). Surface bursts typically produce significant EMP up to the 1 psi over-pressure range, while air bursts produce somewhat less. No evidence exists suggesting that EMP produces harmful effects in humans.

SPECIFIC SITUATION

The population at risk is 137,000 night-time residents and 225,000 or (slightly more) during the day time. Although the City has insufficient space for its residents for nuclear blast protection, a public information campaign could be issued to educate the residents on how to make their own homes better prepared as a fallout shelter.

EMERGENCY RESPONSE ACTIONS

Response activities to the nuclear materials threat will be far reaching and will consist of in-place protection measures, relocation and spontaneous evacuation.

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

THREAT ASSESSMENT 10
LANDSLIDE

GENERAL SITUATION

Landslide is a general term for a falling mass of soil or rocks; vertical movement of small pieces of soil. "Mudslide" (mudflow) is a flow of very wet rock and soil. The primary effects of landsliding or mudsliding can include:

- abrupt depression and lateral displacement of hillside surfaces over distances of up to several hundreds of feet.
- disruption of surface drainage.
- blockage of flood control channels and roadways.
- displacement or destruction of improvements such as roadways, buildings, oil and water wells.

The speed with which landsides can occur vary considerably from rapid rockfalls to virtually imperceptible movements down slope under the pull of gravity. Soil creep is a very slow type of earth flow movement. It occurs mainly in solids containing clay. Most landslides are shallow, ranging up to perhaps 100 feet in depth and limited in extent to generally less than 100 acres. Most are not presently in motion (active), but have moved down slope to a position of stability and have remained.

SPECIFIC SITUATION

The City of Pasadena is largely situated on the surface of uplifted older alluvial fans below the San Gabriel Mountains. The edges of the City encroach onto or near mountainous areas on the west, the northwest and northeast. Geologic units within the City consist of poorly or crudely stratified sand, silt, and gravel in the valley, with dense crystalline rock forming most of the hillsides. Hills in the southeast corner of the City, generally south of Colorado Boulevard, are composed of stratified sedimentary rocks, typically sandstone, conglomerate and shale.

The City's hillsides are vulnerable to slope instability due primarily to the fractured, crushed and weathered condition of the bedrock, and the steep terrain. Oversteepened slopes along the large drainage channels are also locally susceptible. The probability of large bedrock landslides occurring is relatively low, therefore the source of potential losses due to slope instability arises primarily from the occurrence of smaller slope failures in the form of small slides, slumps, soil slips, debris flows and rockfalls. The initiation of such failures is generally tied to a preceding event, such as wildfire, heavy winter storms, seismic activity, or man's activities.

A large portion of the City's mountainous terrain, generally that within the San Gabriel Mountains, has been dedicated to parks and recreation. Nevertheless, residential development is present within steep slopes of the San Rafael Hills, and at the base of the San Gabriel Mountains. The Uniform Building Code and the City's hillside grading

ordinance provide a means by which slope stability in new developments (including the required geologic and soils investigations) can be effectively managed, provided these requirements are strictly enforced. The majority of the City's buildable hillsides are already developed, however, and most of the existing development occurred prior to development of modern grading codes, regulations and practices. Consequently, some older structures may be at risk, especially those located at the top or toe of steep slopes (generally those steeper than 26 degrees), at the mouth of gullies, swales or ravines, and those located near potential wildfire areas.

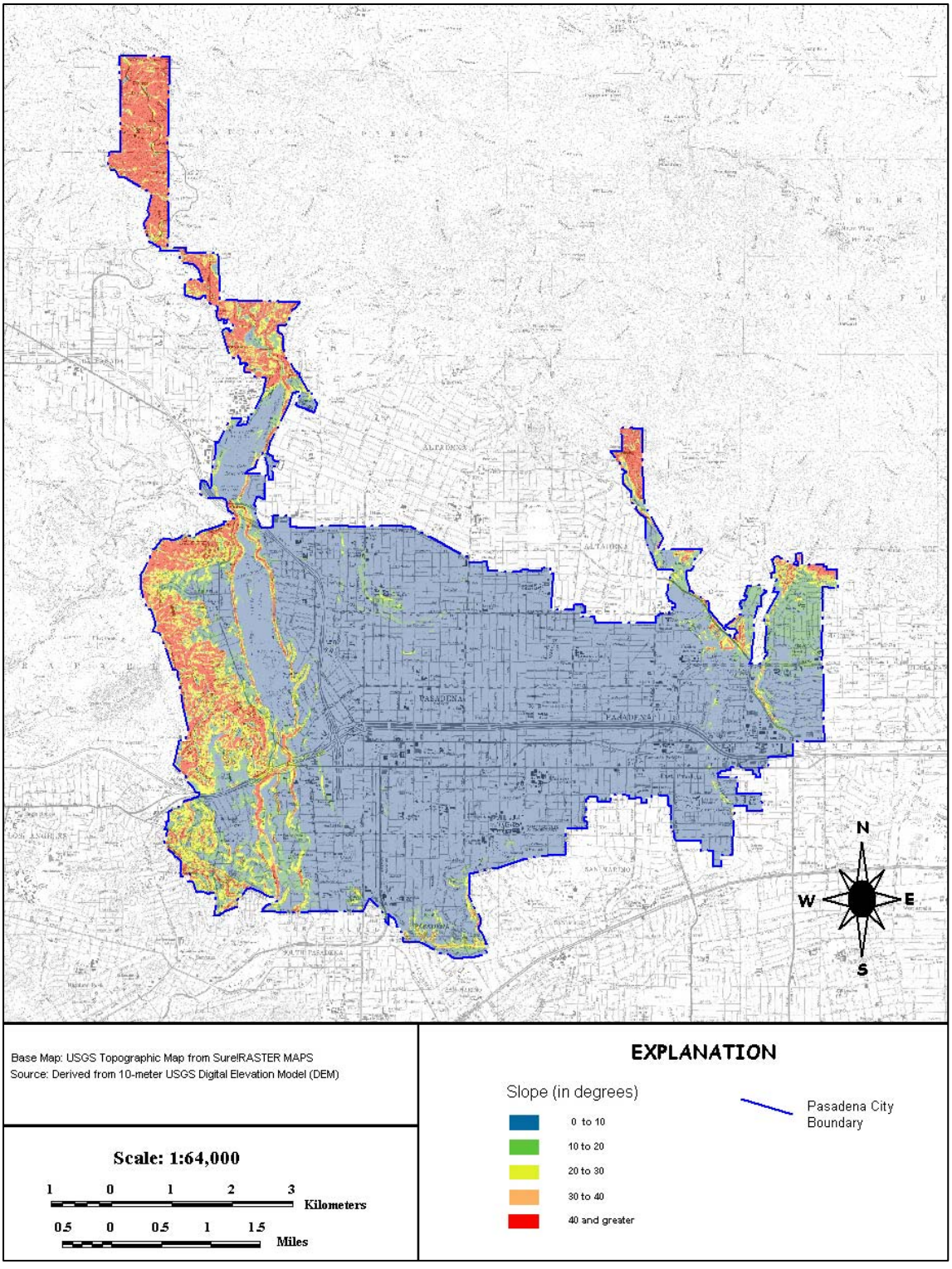
Both the United States Geologic Survey and the California Geologic Survey are currently conducting significant research that focuses on the conditions and processes that lead to destructive slope failures. This includes methodology for analysis of slopes and drainage basins, and the development of susceptibility maps. Detailed maps prepared by either of these agencies showing the prior occurrence of slope failures in the Pasadena area, as well as local susceptibility, are not yet available. Attachment 1, Threat Assessment 10, Slope Instability Map, shows the slope instability areas identified for the Safety Element update, based on slope angle and soil and rock conditions. Attachment 2, Threat Assessment 10, Landslide Inventory, is the map included in the Division of Mines and Geology's Open-File Report 98-05.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan.**

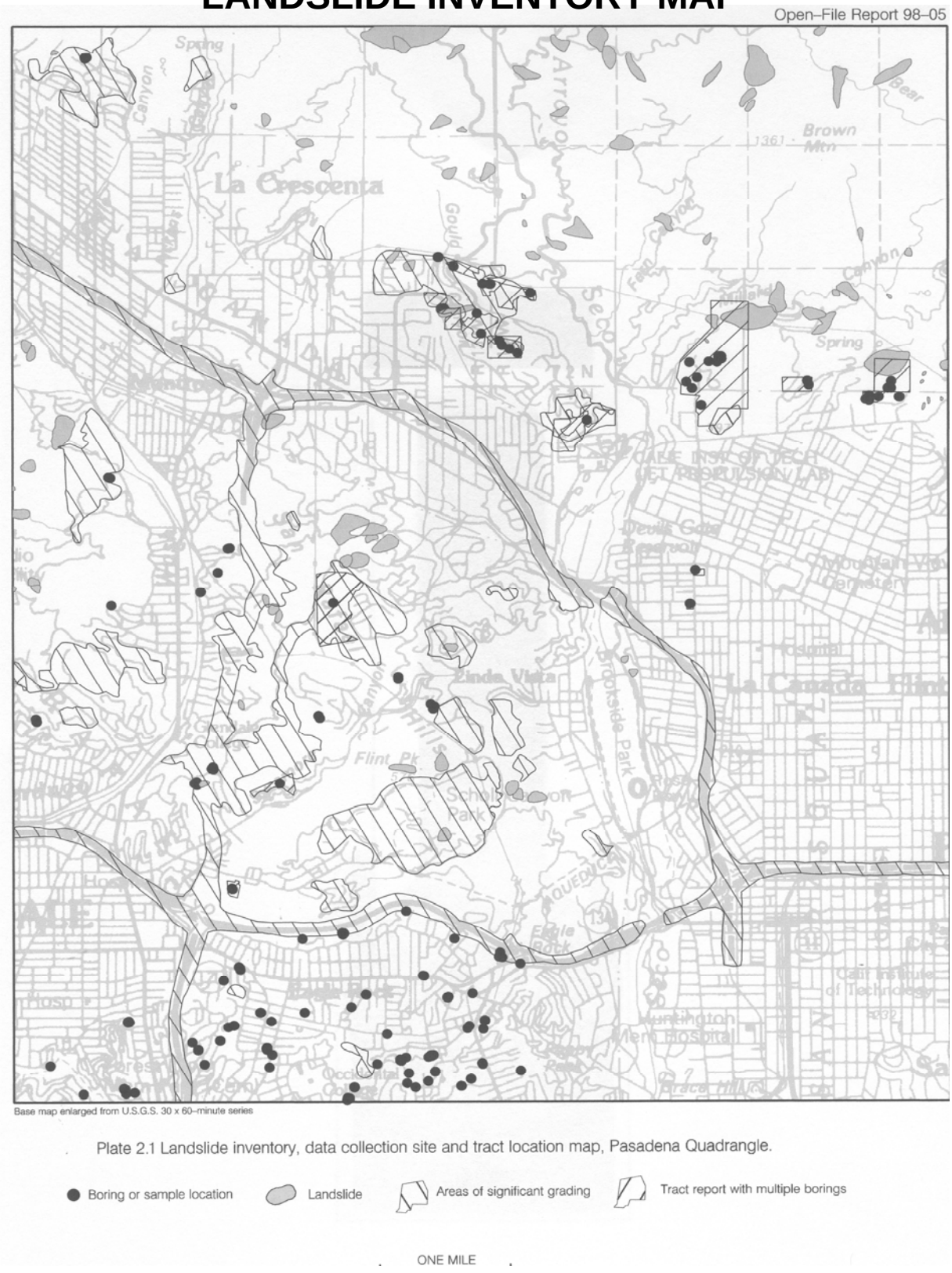
Attachment 1 – Slope Instability Map
Attachment 2 – Landslide Inventory

ATTACHMENT 1, THREAT ASSESSMENT 10
SLOPE INSTABILITY MAP



Source: Safety Element of the General Plan, Earth Consultants International, June 2002

ATTACHMENT 2, THREAT ASSESSMENT 10
LANDSLIDE INVENTORY MAP



SECTION FIVE

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
ATSDR	Agency for Toxic Substances and Disease Registry
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
BPA	Blanket Purchasing Agreements
C of S	Chief of Staff
CAA	Clean Air Act
CALDAP	California Disaster Assistance Program
CalTrans	California Department of Transportation
CALWAS	California Warning System
CAO	Chief Administrative Office(r)
CBO	Community Based Organization
CBRNE	Chemical, Biological, Radiological, Nuclear and Explosive
CCC	California Conservation Corps
CCP	Casualty Collection Points
CD	Civil Defense
CDBG	Community Development Block Grant
CDC	Centers for Disease Control, U.S. Public Health Service
CDF	California Department of Forestry
CDL	Community Disaster Loan
CDRG	Catastrophic Disaster Response Group
CEM	Comprehensive Emergency Management
CEO	Chief Executive Officer
CEP	Comprehensive Emergency Planning
CEPEC	California Earthquake Prediction Evaluation Council
CEPPO	Chemical Emergency Preparedness and Prevention Office
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CERT	Community Emergency Response Team
CESA	California Emergency Services Association
CESFRS	California Emergency Service Fire Radio System
CESRS	California Emergency Services Radio System
CFR	Code of Federal Regulations
CHP	California Highway Patrol
CLEMARS	California Law Enforcement Mutual Aid Radio System
CLERS	California Law Enforcement Radio System
CLETS	California Law Enforcement Telecommunications System
COE	Corps of Engineers (US Army)

COG	**Continuity of Government**
CPG	**Civil Preparedness Guide**
DA	**Damage Assessment**
DAC	**Disaster Application Center**
DAP	**Disaster Assistance Programs**
DCS	**Disaster Communications Service**
DEST	**Disaster Emergency Support Team**
DFCO	**Deputy Federal Coordinating Officer**
DFO	**Disaster Field Office**
DHA	**Disaster Housing Assistance**
DHS	**Department of Homeland Security**
DMAT	**Disaster Medical Assistance Team**
DMORT	**Disaster Mortuary Operational Response Team**
DMIS	**Disaster Management Information System**
DOC	**Department Operations Center**
DOD	**Department of Defense**
DOE	**Department of Energy**
DOJ	**Department of Justice**
DOI	**Department of Interior**
DOL	**Department of Labor**
DOS	**Department of State**
DOT	**Department of Transportation**
DP	**Disaster Preparedness**
DRC	**Disaster Recovery Center**
DRM	**Disaster Recovery Manager**
DRO	**Disaster Recovery Operations**
DSA	**Disaster Support Area**
DSA	**Division of the State Architect (California)**
DSR	**Damage Survey Report**
DWR	**California Department of Water Resources**
EAS	**Emergency Alert System**
ED	**United States Department of Education**
EDD	**Employment Development Department**
EDIS	**Emergency Digital Information System**
EEO	**Equal Employment Opportunity**
EIR	**Environmental Impact Review**
EMAC	**Emergency Management Assistance Compact**
EMI	**Emergency Management Institute**
EMIS	**Emergency Management Information System**
EMMA	**Emergency Managers Mutual Aid**
EMP	**Electromagnetic Pulse**
EMPG	**Emergency Management Performance Grant**
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**
ERT	**Emergency Response Team**
ERT	**Evidence Response Team (FBI)**
ESA	**California Emergency Services Act**
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**
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**
FRMAC	**Federal Radiological Monitoring and Assessment Center**
FTS	**Field Treatment Sites**
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**
HHS	**Department of Health and Human Services**
HMC	**Hazard Mitigation Coordinator**
HMDA	**Hazard Mitigation and Disaster Assistance**
HMGP	**Hazard Mitigation Grant Program**
HMO	**Hazard Mitigation Officer**
HMT	**Hazard Mitigation Team**
HSAS	**Homeland Security Advisory System**
HSC	**Homeland Security Council**
HSOC	**Homeland Security Operations Center**
HSEEP	**Homeland Security Exercise Evaluation Program**
HSPD	**Homeland Security Presidential Directive**
HUD	**Housing and Urban Development Program**
IA	**Individual Assistance**
IAEM	**International Association of Emergency Managers**
IA/O	**Individual Assistance/Officer**
IACG	**Inter Agency Coordinating Group**

IAP	**Incident Action Plan**
IC	**Incident Commander**
ICP	**Incident Command Post**
ICS	**Incident Command System**
IDE	**Initial Damage Estimate**
IFG	**Individual and Family Grant Program (State of California program)**
IFGP	**Individual and Family Grant Program**
IG	**Inspector General**
IIMG	**Interagency Incident Management Group**
IMT	**Incident Management Team**
IRS	**U.S. Internal Revenue Service**
IRMS	**Information Resources Management Service**
JIC	**Joint Information Center**
JDIC	**Justice Data Interface Controller**
JFO	**Joint Field Office**
JPA	**Joint Powers Agreement**
JPIC	**Joint Public Information Center**
JIC	**Joint Information Center**
JIS	**Joint Information System**
JOC	**Joint Operations Center**
JTTF	**Joint Terrorism Task Force**
LFA	**Lead Federal Agency**
LGAC	**Local Government Advisory Committee**
MACS	**Multi-Agency Coordination System**
MARAC	**Mutual Aid Regional Advisory Committee**
MARS	**U.S. Army Military Affiliate Radio System**
MC	**Mobilization Center**
MHFP	**Multihazard Functional Planning**
MMRS	**Metropolitan Medical Response Team**
MOA	**Memorandum of Agreement**
MOU	**Memorandum of Understanding**
MSA	**Multi-Purpose Staging Area**
MTA	**Metropolitan Transit Authority**
NAWAS	**National Warning System**
NCS	**National Communications System**
NDAA	**California Natural Disaster Assistance Act**
NDEA	**National Defense Education Act**
NDMS	**National Disaster Medical System**
NEP	**National Exercise Program**
NEST	**Nuclear Emergency Search Team**
NETC	**National Emergency Training Center**
NFA	**National Fire Academy**
NFDA	**National Funeral Directors Association**
NFIP	**National Flood Insurance Program**
NGO	**Non Government Organization**
NHC	**National Hurricane Center**
NHPA	**National Historic Preservation Act**
NICC	**National Interagency Coordinating Center, National Infrastructure Coordination Center**

NIFCC	**National Interagency Fire Coordination Center**
NIMS	**National Incident Management System**
NMRT	**National Medical Response Team**
NOAA	**National Oceanic and Atmospheric Administration**
NOC	**National Operations Center**
NOI	**Notice of Interest**
NRC	**Nuclear Regulatory Commission**
NRCS	**Natural Resources Conservation Service**
NRP	**National Response Plan**
NRT	**National Response Team**
NSC	**National Security Council**
NSSE	**National Special Security Event**
NTC	**National Teleregistration Center**
NVOAD	**National Voluntary Organizations Active in Disaster**
NWS	**National Weather Service**
OA	**Operational Area**
OASIS	**Operational Area Satellite Information System**
OEM	**Office of Emergency Management**
OES	**Office of Emergency Services**
OMB	**Office of Management and Budget (Federal)**
OPA	**Oil Pollution Act**
OPM	**Office of Personnel Management**
OSA	**California Office of the State Architect**
OSC	**On-Scene Coordinator**
OSHA	**Occupational Safety and Health Administration**
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**
PDD	**Presidential Decision Directive**
PDH	**Packaged Disaster Hospital**
PFO	**Principal Federal Officer**
PIO	**Public Information Officer**
PL	**Public Law - U.S. Public Law 93-288, Federal Disaster Relief Act of 1974**
POC	**Point of Contact**
PNP	**Private Nonprofit Organization**
PSI	**Pounds per Square Inch**
PUC	**California Public Utilities Commission**
PW	**Project Worksheet**
RACES	**Radio Amateur Civil Emergency Services**
RADEF	**Radiological Defense**
RAP	**Radiological Assistance Program**
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**
RIMS	**Response Information Management System**
RM	**Radiological Monitor**
RO	**Radiological Officer**
ROC	**Regional Operations Center**
RRCC	**Regional Response Coordinating Center**
RRT	**Regional Response Team**
RTOS	**Rail Transit Operations Supervisor**
SA	**Salvation Army**
SAC	**Special Agent in Charge**
SAP	**State Assistance Program**
SAR	**Search and Rescue**
SARA	**Superfund Amendment Reauthorization Act (Title III)**
SAST	**California State Agency Support Team**
SBA	**Small Business Administration**
SCAQMD	**South Coast Air Quality Management District**
SCC	**Sheriff's Communications Center, 1277 North Eastern Avenue.**
SCESA	**Southern California Emergency Services Association**
SCO	**State Coordinating Officer**
SEMO	**State Emergency Management Office**
SEMS	**Standardized Emergency Management System**
SFLEO	**Senior Federal Law Enforcement Officer**
SFO	**Senior Federal Officer**
SHMO	**State Hazard Mitigation Officer**
SHPO	**State Historic Preservation Officer**
SIOC	**Strategic Information and Operations Center**
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**
TEWG	**Terrorism Early Warning Group**
TH	**Temporary Housing**
TSCA	**Toxic Substances Control Act**
TWG	**Terrorism Working Group**
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**
WMD	**Weapons of Mass Destruction.**

GLOSSARY OF TERMS

This Glossary contains definitions of terms commonly used in the Standardized Emergency Management System (SEMS).

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: "Action Plan" means the plan prepared in the EOC containing the emergency response objectives of that SEMS level 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 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, modifications to plans and procedures, training need, and recovery activities. After action reports are required under SEMS after any emergency which requires a declaration of an emergency. Reports are required within 90 days.

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 ICS, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation), or assisting and/or cooperating (providing resources and/or assistance). (See Assisting, 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 SEMS 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.

AMBER Plan: A Plan adopted locally or statewide that provide for an EAS Alert message to use the public to find abducted children. For more information contact the National Center for Missing sand Exploited Children (NCMEC). (703) 837-6354

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) to 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.

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

Assistant: Title for subordinates of the Command Staff positions at the Field SEMS 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.

Attention Signal: The two tone 853 /960 Hertz tone now shortened to eight seconds that was the old EBS signal that activated decoders and alerted the public to stand by for emergency information.

Available Resources: Incident-based resources which are available for immediate assignment.

B

Base: The location at an incident at which 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 collocated 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 floodplain 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 SEMS 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 area also used in the same sequences at the SEMS EOC Levels.

Branch Director: The ICS title for individuals responsible for supervision of a Branch at the Field Level. At SEMS EOC levels, the title Branch Coordinator is preferred.

C

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

California Emergency Council: The official advisory body to the Governor on all matters pertaining to statewide emergency preparedness.

Camp: A geographical site, within the general incident area, separate from the Incident Base, 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 thee is no commonly accepted definition of a catastrophic disaster the term implies an event or incident which produces severe and widespread damages of such a magnitude as to result in the requirement for significant resources from outside the affected area to provide the necessary response.

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 SEMS Field level include: 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 Stated 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 including riots and mass demonstrations as well as terrorist attacks.

Clear Text: The use of plain English in radio communications transmissions. No Ten Codes or agency specific codes are used when utilizing Clear Text.

CLERS: California Law Enforcement Radio System. The State's radio system dedicated to public safety/law enforcement purposes that run of the State's microwave backbone. Local CLERS VHF channels provide State EAS audio to broadcasters.

CLETS: California Law Enforcement Telecommunications System. CLETS terminals can be permissioned to originate EDIS messages. Please see EDIS definition below.

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 SEMS 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 assistant s, as needed. These functions may also be found at the EOC levels in SEMS. At the EOC, they would report to the EOC Director but may be designated as Coordinators. At EOCs, the functions may also be established as Sections, or Branches to accommodate subsequent expansion.

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 the communicating of chemical formation to local agencies or the public.

Compact: Formal working agreements among agencies to obtain mutual aid.

Compensation Unit/Claims Unit: Functional unit within the Finance/Administration 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 Management.

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), for all types of emergencies and disaster (natural, manmade, and attack), and for 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).

Consequence Management: Predominantly an emergency management function and included measures to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of terrorism. The requirements of consequence management and crisis management are combined in the National Response Plan.

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 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 also be verbal between authorized agency or jurisdictional representatives at the incident.

Cost Unit: Functional unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.

Crisis Management: Predominantly a law enforcement function and included measures to identify, acquire, and plan the use of resources needed to anticipate, prevent, and/or resolve a threat or act of terrorism. The requirements of consequence management and crisis management are combined in the NRP

D

Damage Assessment: The process utilized to determine the magnitude of damage and the unmet needs of individuals, businesses, the public sector, and the community caused by a disaster or emergency event.

Dam Failure: Part or complete collapse of a dam 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 give all assistance possible. If assistance is beyond their capability, the Governor requests a Presidential declaration of a major disaster or an emergency.

Delegation of Authority: A statement provided to the Incident Commander by the Agency Executive delegating authority and assigning responsibility. 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: A 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 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 SEMS EOC levels.

Designated Area: Any emergency or major disaster-affected portion of a State that has been determined eligible for Federal assistance.

Designation: The action by the Associate Director, SLPSD, to determine the type of assistance to be authorized under the Stafford Act for a particular declaration; and the action by the FEMA Regional director to determine specifically what counties, or county equivalents, are eligible for such 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, whether it be 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 to provide disaster victims a "one-stop" service in 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 to be 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. Annual matching awards are provided to Stated 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 impressed 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, having official recognition, and full or partial support of the county, city, town or district in which such fire department is located.

Disaster Welfare Inquiry (DWI): A service that provides health and welfare reports about relatives and certain other individuals believed to be in a disaster area and when the disaster caused dislocation or disruption of normal communications facilities 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: Division are used to divide an incident into geographical areas of operation. Divisions area identified by alphabetic characters for horizontal applications and, often, by numbers when used in buildings. Divisions are also used at SEMS 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. At EOC level, the title is Division Coordinator.

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, commonly expressed in REM.

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

E

Earthquake Advisory: A statement issued by the State of California Office of Emergency Services (OES), usually following a medium-sized earthquake, regarding scientific opinion that there is an enhanced likelihood for additional seismic activity within a specified period (usually three to five days).

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 such actions as the setting or freezing of wages, prices, and rents or the direct rationing of goods. Indirect controls can be put into effect by government through use of monetary, credit, tax, or other policy measures.

EDIS: Emergency Digital Information Service. The "government wireless service" provided by the State and carried locally on 39.32 MHz. that is used for longer form text emergency information, along with a website at [**www.edis.ca.gov**]. Plans are underway for EDIS to be linked with EAS to help TV stations put text on screen faster to better serve the needs of the hearing impaired. EDIS is also a key system to reinforce and support the LA County AMBER Plan.

Emergency: A condition of disaster or of 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, the Governor's warning of an earthquake or volcanic prediction, or an earthquake or other conditions, other than conditions resulting from a labor controversy.

Emergency Alert 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.

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, whether it be the actual direction of field forces or the coordination of joint efforts of governmental and private agencies in supporting such operations.

Emergency Management Coordinator: The individual within each jurisdiction that is delegated the day to day responsibility for the development and maintenance of all emergency management coordination efforts.

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 from which centralized emergency management can be performed. EOC facilities are established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an emergency.

Emergency Operations Plan: The plan that each jurisdiction has and maintains 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 includes the warning (where applicable) and impact phase and continues 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 operations, 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 Public Information (EPI): Information disseminated to the public by official sources during an emergency, using broadcast and print media. EPI includes: (1) instructions on survival and health preservation actions to take (what to do, what not to do, evacuation procedures, etc.), (2) status information on the disaster situation (number of deaths, injuries, property damage, etc.), and (3) other useful information (state/federal assistance available).

ENN: The Emergency News Network. A term used to describe the use of voice, video, and data to provide not only alerts, but also the ongoing story of any major emergency; from response to recovery much as NASA does with its NASA Mission Control.

EOB The Los Angeles County Sheriff's Department Emergency Operations Bureau. The EOB staffs and maintains the County Emergency Operations Center.

EOM The End Of Message FSK "digital" signal sent at the end of an EAS message that tells EAS decoders an alert sequence has ended. Without an EOM, decoders will not return to the normal program mode for a two-minute time out period.

Emergency Public Information System: The network of information officers and their staffs who operate 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 Support Function: A grouping of government and certain private-sector capabilities into an organizational structure to provide the support, resources, program implementation, and services that are most likely to be needed to save lives, protect property and the environment, restore essential services and critical infrastructure, and help victims and communities return to normal, when feasible, following domestic incidents. The ESFs serve as the primary operational-level mechanism to provide assistance to State, local, and tribal governments or to Federal departments and agencies conducting missions of primary Federal responsibility.

Emergency Response Agency: Any organization responding to an emergency, whether in the field, at the scene of an incident, or to an EOC, in response to an emergency, or providing mutual aid support to such an organization.

Emergency Response Personnel: Personnel involved with an agency's response to an emergency.

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

Essential Facilities: Facilities that are essential for 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. ICS can be used as the management system for a wide range of events, e.g., parades, concerts or sporting events.

Exercise: 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, 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 a "crash basis" by individuals, single families, or small groups of families.

F

Facilities Unit: Functional unit within the Support Branch of the Logistics Section at the SEMS 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: Provides 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 (peacetime) disasters.

Federal Emergency Management Agency: This agency was 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, a part of FEMA, that administers the National Flood Insurance Program.

FEMA-State Agreement: A formal legal document between FEMA and the affected State stating 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.

Federal Coordinating Officer (FCO) - (1) The person appointed by the FEMA Director, or in his/her absence, the FEMA Deputy Director, or alternatively the FEMA Associate Director for Response and Recovery, following a declaration of a major disaster or of an emergency by the President, to coordinate Federal assistance. The FCO initiates action immediately to assure that Federal Assistance is provided in accordance with the declaration, applicable laws, regulations, and the FEMA-State agreement. (2) The FCO is the senior Federal official appointed in accordance with the provisions of Public Law 93-288, as amended (the Stafford Act), to coordinate the overall consequence management response and recovery activities. The FCO represents the President as provided by Section 303 of the Stafford Act for the purpose of coordinating the administration of Federal relief activities in the designated area. Additionally, the FCO is delegated responsibilities and performs those for the FEMA Director as outlined in Executive Order 12148 and those responsibilities delegated to the FEMA Regional Director in the Code of Federal Regulations, Title 44, Part 205.

Federal On-Scene Commander (OSC) - The FBI official designated upon JOC activation to ensure appropriate coordination of the overall United States government response with Federal, State and local authorities, until such time as the Attorney General transfers the LFA role to FEMA.

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 levels which is responsible for all costs and financial considerations. At the incident the Section can include the Time Unit, Procurement Unit, Compensation/Claims Unit and Cost Unit.

FIPS Code: Federal Information Processing Identifier. A unique five digit number for every county, borough, parish or census district in the US and its possessions.

Flood Hazard Boundary Map (FHBM): the official map of a community that shows the boundaries of the flood plain and special flood hazard areas that have been designated. It is prepared by FEMA, using the best flood data available at the time a community enters the emergency phase of the NFIP. It is superseded by the FIRM after a more detailed study has been completed.

Flood Insurance: The insurance coverage provided under the National Flood Insurance Program.

Flood Insurance Rate Map (FIRM): The official map of a community prepared by FEMA, which shows the base flood elevation, along with the special hazard areas and the risk premium zones. the study is funded by FEMA and is based on detailed surveys and analysis of the site-specific hydrologic characteristics.

Food Unit: Functional unit within the Service Branch of the Logistics Section responsible for providing meals for incident and EOC personnel.

Function: In ICS, function refers to the five major activities in the 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 Field SEMS level, the General Staff consists of:

Operations Section Chief
Planning/Intelligence Section Chief
Logistics Section Chief
Finance/Administration Section Chief

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 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 presents or potential danger to humans or the environment. Generally, such materials are classed as explosives and blasting agents, flammable and nonflammable 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 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: Authorized under Section 404 of the Stafford Act. Provided funding for hazard mitigation projects that 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 that includes the actions needed to minimize future vulnerability to hazards.

Helibase: The main location for parking, fueling, maintenance, and loading of 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 of supplies, equipment, or personnel.

Hierarchy of Command: (See Chain of Command)

Homeland Security Advisory System (HSAS): HSAS is a color-coded terrorism threat advisory scale. It was created by a Presidential Directive in order to provide a "comprehensive and effective means to disseminate information regarding the risk of terrorist acts to Federal, State, and local authorities and to the American people." The different levels trigger specific actions by federal agencies and state and local governments, and they affect the level of security at some airports and other public structures

I

Incident: An occurrence or event, either human-caused or by natural phenomena, 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 and 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 collocated with the Base. There is only one Base per incident.

Incident Commander: The individual responsible for the command of all function at the field response level.

Incident Command Post (ICP): The location at which the primary command functions are executed. The ICP may be collocated with the incident base or other incident facilities.

Incident Command System (ICS): The nationally used standardized on-scene emergency management concept 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 necessary for the selection of appropriate strategy(s) 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 or through 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 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): Strategy for implementing emergency management activities which builds upon those functions common to preparedness for any type of occurrence and provides for special requirements of individual emergency situations. Seeks 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

Joint Field Office (JFO): A temporary Federal facility established locally to provide a central point for Federal, State, local, and tribal executives with responsibility for incident oversight, direction, and/or assistance to effectively coordinate protection, prevention, preparedness, response, and recovery actions. The JFO will combine the traditional functions of the JOC, the FEMA DFO, and the JIC within a single Federal facility.

Joint Information Center (JIC): A facility established to coordinate all incident-related public information activities .It is the central point of contact for all news media at the scene of the incident. Public information officials from all participating agencies should collocate at the JIC.

Joint Information System (JIS): Integrates incident information and public affairs into a cohesive organization designed to provide consistent, coordinated, timely information during a crisis or incident operations. The mission of the JIS is to provide a structure and system for developing and delivering coordinated interagency messages; developing, recommending, and executing public information plans and strategies on behalf of the IC; advising the IC concerning public affairs issues that could affect a response effort; and controlling rumors and inaccurate information that could undermine public confidence in the emergency response effort.

Joint Operations Center (JOC):The JOC is the focal point for all Federal investigative law enforcement activities during a terrorist or potential terrorist incident or any other significant criminal incident, and is managed by the Senior Federal Law Enforcement Officer. The JOC becomes a component of the JFO when the National Response Plan is activated.

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

LECC: Local Emergency Communications Committee. The LECC is the broadcast industry component of EAS that works closely with local government entities to form a partnership to make EAS work.

Liaison Officer: A member of the Command Staff at the Field SEMS level 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 conditions of disaster or of extreme peril to the safety of persons and property within the territorial limits of a county, city and county, or city, caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, or earthquake or other conditions, other than conditions resulting from a labor controversy, which conditions are or are likely to be beyond the control of the services, personnel, equipment, and facilities of that political subdivision and required the combined forces of political subdivisions to combat.

Local Government: Means local agencies defined in Government Code 8680.2 and special district 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, and if necessary bring such concerns to the attention of OES Executive Management.

Logistics Section: One of the five primary functions found at all SEMS levels. The Section 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, explosions, or other catastrophe in any part of the United States which, in the determination of the President, causes damage of sufficient severity and magnitude to warrant major disaster assistance under the Federal Disaster Relief Act, above and beyond emergency services by the Federal Government, to supplement the efforts and available resources of States, local governments, and disaster relief organizations in alleviating the damage, loss, hardship, or suffering caused thereby.

Management by Objectives: In SEMS field and EOC 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, selection of appropriate strategy(s) to achieve the objectives; and the direction or assignments associated with the selected strategy.

Marshaling Area: An area used for the completed mobilization and assemblage of personnel and resources prior to their being sent directly to the disaster affected area. Marshaling Areas area 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 which may include lodging, food, clothing, registration, welfare inquiry, first aid, and essential social services.

Master Mutual Aid Agreement: An agreement entered into by and between the State of California, its various departments and agencies, and the various political subdivision, municipal corporations, and other public agencies of the State of California to assist each other by providing resources during an emergency. Mutual aid occurs when two or more parties agree to furnish resources and facilities and to render services to each other to prevent and combat any type of disaster or emergency.

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 Field levels responsible for the development of the Medical Emergency Plan, and for providing emergency medical treatment of incident personnel.

Message Center: The Message Center is part of the Incident or EOC Communications Center is collocated 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 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 to respond to or support an incident.

Mobilization Center: An off-incident location at which emergency service personnel and equipment area temporarily located pending assignment to incidents, release, or reassignment.

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 who make decisions regarding the prioritizing of incidents and the sharing and allocations 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. MACS organizations are used within the California Fire Services.

Multi-Agency Incident: An incident where one or more agencies assist a jurisdictional agency or agencies. The incident may be managed under single or Management.

Multi-jurisdiction Incident: An incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In ICS these incidents will be managed under Management.

Multi-purpose Staging Area (MSA): A predesignated location such as a County/District Fairgrounds having a large parking areas and shelter for equipment and operator, which provides a base for coordinated localized emergency operations, a rally point for mutual aid coming into an area, and a site for post-disaster population support and recovery or emergency.

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

Mutual Aid Coordinator: An individual at local government, operational area, region or state level that is responsible to coordinate the process of requesting, obtaining, processing and using mutual aid resources. Mutual Aid Coordinator duties will vary depending upon the mutual aid system.

Mutual Aid Region: A mutual aid region is a subdivision of state OES established to assist in the coordination of mutual aid and other emergency operations within a geographical area of the state, consisting of two or more county (operational) areas.

Mutual Aid Staging Area: A temporary facility established by the State Office of Emergency Services 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): FEMA's campus in Emmitsburg, Maryland, composed of the United States Fire Administration (USFA) and the Emergency Management Institute (EMI).

National Disaster Medical System (NDMS): A coordinated partnership between DHS, HHS, DOD, and the Department of Veterans Affairs established for the purpose of responding to the needs of victims of a public health emergency. NDMS provides medical response assets and the movement of patients to healthcare facilities where definitive medical care is received when required.

National Flood Insurance Program (NFIP): The Federal program, created by an act of Congress in 1968, that makes flood insurance available in communities that enact satisfactory floodplain management regulations.

National Incident Management System (NIMS): A system mandated by HSPD-5 that provides a consistent, nationwide approach for Federal, State, local, and tribal governments; the private sector; and NGOs to work effectively and efficiently together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size, or complexity. To provide for interoperability and compatibility among Federal, State, local, and tribal capabilities, the NIMS includes a core set of concepts, principles, and terminology.HSPD-5identifies these as the ICS; multiagency coordination systems; training; identification and management of resources (including systems for classifying types of resources);qualification and certification; and the collection, tracking, and reporting of incident information and incident resources.

National Infrastructure Coordination Center (NICC): Managed by the DHS Information Analysis and Infrastructure Protection Directorate, the NICC monitors the Nation's critical infrastructure and key resources on an ongoing basis. In the event of an incident, the NICC provides a coordinating vehicle to share information with critical infrastructure and key resources information-sharing entities.

National Response Plan (NRP): The federal plan to be used when responding to Incidents of National Significance.

National Interagency Coordination Center (NICC): The organization responsible for coordinating allocation of resources to one or more coordination centers or major fires within the Nation. Located in Boise, ID.

National Warning System: The federal portion of the civil defense warning system, used to disseminate warning and other emergency information from the warning centers or regions to warning points in each state.

Nuclear Incident (Fixed Facility): Any occurrence at a nuclear power plant resulting in a potential or actual release of radioactive material in sufficient quantity which threatens the health and safety of nearby populations.

O

OEM: The Los Angeles County Office of Emergency Management whose offices are at the LA County EOC. It is the civilian component of County emergency management that reports directly to the County Chief Administrative Officer.

Office of Emergency Services: The Governor's Office of Emergency Services.

One Hundred (100)-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 Area: An intermediate level of the state emergency organization, consisting of a county and all political subdivisions within the county area.

Operational Area Coordinator: The individual within the operational area responsible for a specific function such as law enforcement, coroner's services, or emergency medical services.

Operational Area Satellite Information System (OASIS): A statewide emergency management system based on the operational area concept. An operational area is defined in law (Section 8559, California Government Code) as an organization (not a jurisdiction) whose boundaries are those of a county. This organization is not necessarily a county government; it could be several cities, or a city and a county, a county government or several county governments, willing to undertake to coordinate the flow of mutual aid and information within the defined area. The operational area concept is the backbone of the statewide emergency management system.

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 can be of various lengths, although usually not over 24 hours.

Operations Section: One of the five primary functions found at all SEMS levels. The Section responsible for all tactical operations at the incident, or for the coordination of operational activities at an EOC. The Operations Section at the SEMS 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 because of 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: A 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 element 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 levels. Responsible for the collection, evaluation, and dissemination of information related to the incident or an 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 on the status of resources assigned to the incident. At the SEMS 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 consisting of: 1) a city; 2) a city and its sphere of influence in adjacent unincorporated areas; 3) a portion of the unincorporated area of a county; 4) a military installation; 5) a state facility such as a correctional institution. Zoning simplifies the process of collecting and compiling data according to geographical location.

Political Subdivision: Includes any city, city and county, county, district, or other local governmental agency or public agency authorized by law.

Principal Federal Official (PFO): The Federal official designated by the Secretary of Homeland Security to act as his/her representative locally to oversee, coordinate, and execute the Secretary's incident management responsibilities under HSPD-5 forIncidents of National Significance.

Procurement Unit: Functional unit within the Finance/Administration Section 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, nonprofit organizations other than assistance for the direct benefit of individuals and families.

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

R

Radio Amateur Civil Emergency Services (RACES): An emergency services designed to make efficient use of skilled radio amateurs throughout the state in accordance with approved civil defense communications plans. Operators are registered with an OES agency to provide emergency communications support.

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

Radiological Officer: (RO) An individual assigned to a Emergency Management Staff 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 to which he is assigned; and perform operator's checks and maintenance on radiological instrument.
Reception Area: An area which, through a hazard analysis and related preparedness planning, is predesignated to receive and care for (or provide basic needs 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 major 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, grants and loans to eligible individuals and government entities to recovery from the effects of a disaster.

Regional Director (RD): A director of a regional office of FEMA, or his/her designated representative. As used in the Stafford Act, Regional Director also means the Disaster Recovery Manager who has been appointed to exercise the authority of the regional Director for a particular emergency or major disaster.

Regional Emergency Operations Center (REOC): Facilities found at State OES Administrative Regions. REOCS are used to coordinate information and resources among operational areas and between the operational areas and the state level.

Relocatees: An individual who is relocated from a hazard area to a low risk area with the possibility of not returning.

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

Remedial Operations: Actions taken after the onset of an emergency situation to offset or alleviate its effects.

Reporting Locations: Specific locations or facilities where incoming resources can check-in at the incident. (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 area described by kind and type, and may be used in tactical support or supervisory capacities at an incident or at EOCs.

Resources Management: Efficient management requires a system for identifying available resources at all jurisdictional levels to enable timely and unimpeded access to resources needed to prepare for, respond to, or recover from an incident. Resource management

under the National Incident Management System includes mutual aid agreements; the use of special Federal, State, local, and tribal teams; and resource mobilization protocols.

Resources Unit: Functional unit within the Planning Section at the SEMS Field Response level 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 resources 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 using a partial activation of selected ESS or full activation of all ESS to meet the needs of the situation.

S

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

Search: Systematic investigation of 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 especially for finding persons entrapped sufficiently to preclude detection by sight or sound. (NOTE: 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., Operations, Planning, Logistics, Administration/Finance.

Section Chief: The ICS title for individuals responsible for command of functional sections: Operations, Planning/Intelligence, Logistics and Administration/Finance. At the EOC level, the position title will be Section Coordinator.

Sensitive Facilities: Facilities in reception areas that will not normally be used as lodging facilities for relocatees. The facilities area 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 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 comprised of two or more normally independent organizations grouped together to increase operational control and efficiency during the emergency.

Service Branch: A Branch within the Logistics Section responsible for service activities at the incident Includes the Communications, Medical and Food Units.

SHB: Sheriff's Headquarters Bureau. The Public Information arm of the Los Angeles County Sheriff's Department.

Shelter Complex: A geographic grouping of facilities to be used for fallout shelter when such an arrangement serves planning, administrative, an/or operation purposes. Normally, a complex will include a maximum of 25 individual shelter facilities, within a diameter of about 2 mile.

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 responsible for the collection, organization and analysis of incident status information, and for analysis of the situation as it progresses. Reports to the Planning Section Chief.

Span of Control: The supervisory ratio maintained within an ICS or EOC 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 (as defined in California Code of Regulations 2900(s) for purposes of natural disaster assistance. This may include a joint powers authority established under section 6500 et seq. of the Code.

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: Staging Areas 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 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, covering those features of operations which lend themselves to a definite or standardized procedure. Standard operating procedures support an annex by indicating in detail how a particular task will be carried out.

Standardized Emergency Management System (SEMS): A system required by California Government Code for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS consists of five organizational levels which are activated as necessary: Field Response, Local Government, Operation Area, Region, State.

State Agency: Any department, division, independent establishment, or agency of executive branch of the 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 of extreme peril to the safety of persons and property within the state caused by such conditions as air pollution, fire, flood, storm, epidemic, riot, or earthquake or other conditions, other than conditions, resulting from a labor controversy, or conditions causing a "state of war emergency", which conditions by reason of magnitude, are or are likely to be beyond the control of the services, personnel, equipment, and facilities of any single county, city and county, or city and require the combined forces of a mutual aid region or regions to combat.

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, or upon the receipt by the state of a warning from the federal government that such an enemy attack is probable or imminent.

State Operations Center (SOC): An EOC facility operated by the Governor's Office of Emergency Services at the state level in SEMS.

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: Functional unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.

Support Branch: A Branch within the Logistics Section responsible for providing personnel, equipment and supplies to support incident operations. Includes the Supply, Facilities and Ground Support Units.

Support Resources: Non-tactical resources under the supervision of the Logistics, Planning, Finance/Administration Sections or the Command Staff.

Supporting Materials: Refers to the several attachments that may be included with an Incident Action Plan, e.g., communications plan, map, safety plan, traffic plan, and medical plan.

T

Tactical Direction: Direction given by the Operations Section Chief at the SEMS Field level which 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: Personnel with special skills that can be used anywhere within the ICS or EOC organization.

Technological Hazard: Includes a range of hazards emanating from the manufacture, transportation, and use of such substances as radioactive materials, chemicals, explosives, flammables, agricultural pesticides, herbicides and disease agents; oil spills on land, coastal waters or inland water systems; and debris from space.

The Petris Bill #1841: As a result of the lessons learned from the disasters in Northern California, the State of California passed into law in September of 1992 the Petris Bill. This legislation directs the Office of Emergency Services to implement the use of the ICS and MACS throughout the State by no later than December 1, 1996.

Time Unit: Functional unit within the Finance/Administration Section responsible for recording time for incident or EOC personnel and hired equipment.

Tort: An act that harms another. It occurs when a person commits an act, without right and as a result another is harmed.

Traffic Control Points (TCP): Places along movement routes that are manned by emergency personnel to direct and control the flow of traffic.

Triage: A process of priority sorting sick and injured people on the basis of urgency and type of condition presented so that they can be routed to appropriate medical facilities.

Tsunami: Also called a seismic sea wave. It is a large oceanic wave generated by earthquakes, submarine volcanic eruptions, or large submarine landslides in which sudden forces are applied to the water mass. The fastest tsunami waves can move at speeds of hundreds of miles per hour in the open ocean However, as the waves enter shallower waters in coastal area, wave velocity decreases and wave height can increase to 100 feet or more on impact at the shore line.

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

U

Unified Area Command: A Unified Area Command is established when incidents under an Area Command area multi-jurisdictional. (See Area Command and Management.

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

Unit: An organizational element having functional responsibility. Units are commonly used in incident Planning Logistics, or Finance/Administration Section and can be used in operations for some applications. Units are also found in EOC organizations.

Unity of Command: The concept by which each person within an organization reports to one and only one designated person.

Urban Fire: Any instance of uncontrolled burning which results in structural damage to residential, commercial, industrial, institutional, or other properties in developed areas.

Urban Rescue: The complex process in which trained personnel use specialized equipment to locate and extricate victims trapped in collapsed buildings, and the mobilization and management of such personnel and equipment.

V

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

W

Wildfire: 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.