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*Note: Items identified with a (CPG-#) (Civil Preparedness Guide) following must remain in this plan as it complies with the Federal CPG I-8A crosswalk.
All items identified with a (SEMS-#) following must remain in this plan as it complies with the SEMS crosswalk.*

PART ONE, SECTION ONE

BASIC PLAN

PURPOSE

The Basic Plan addresses the City's planned response to emergencies associated with natural disasters and technological incidents—including both peacetime and wartime nuclear defense operations. It provides an overview of operational concepts, identifies components of the City's emergency 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 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. 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 (see **Part One, Section Three—Hazard Mitigation**).

CONCEPT OF OPERATIONS (CPG-20)

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 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 operations plan and commitment of resources. All agencies must be prepared to respond promptly and effectively to any foreseeable emergency, including the provision and utilization of mutual aid (see **Part One, Section Four—Mutual Aid**).

Emergency management activities during peacetime and national security emergencies are often associated with the four emergency management phases indicated below. (CPG-19) However, not every disaster necessarily includes all indicated phases.

Preparedness Phase

The preparedness phase involves activities taken in advance of an emergency. 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 situation is imminent or likely to occur soon. Actions to be accomplished include, but are not necessarily limited to (*CPG-48*):

- Review and update of emergency plans, SOPs/EOPs, and resources listings.
- Dissemination of accurate and timely emergency 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.

Emergency Response Phase

Pre-Emergency

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 and apprising them of safety measures to be implemented.
- Advising the Los Angeles County Operational Area of the emergency.
- Identifying the need for mutual aid and requesting such through the Los Angeles County Operational Area via the Temple Sheriff's Station.
- Proclamation of a Local Emergency by local authorities.

Emergency Response

During this phase, emphasis is placed on saving lives and property, control of the situation and minimizing effects of the disaster. Immediate response is accomplished 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 situation can be controlled without mutual aid assistance from outside the City.

Evacuation of portions of the City are required due to uncontrollable immediate and ensuing threats.

Mutual aid from outside the City is required.

The City is either minimally impacted, or not impacted at all, and is requested to provide mutual aid to other jurisdictions.

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

Dissemination of accurate and timely emergency public 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 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. If required, State Office of Emergency Services (OES) may coordinate the establishment of one or more Disaster Support Areas (DSAs) where resources and supplies can be received, stockpiled, allocated, and dispatched to support operations in the affected area(s).

Depending on the severity of the emergency, 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 emergency response efforts and initial recovery support will be coordinated by the REOC.

Sustained Emergency

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

Recovery Phase

As soon as possible, the State OES 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 Application Centers (DACs) 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.

Peacetime Emergencies

The City's partial or total response to natural disasters or technological incidents will be dictated by the type and magnitude of the emergency. Generally, response to a major peacetime emergency situation will progress from local, to county, to state, to federal involvement.

For planning purposes, State OES has established three levels of emergency response to peacetime emergencies, which are based on the severity of the situation and the availability of local resources. (Note: These levels do not directly correlate with the four classifications of nuclear power emergencies.)

Level One—Decentralized Coordination and Direction

A minor to moderate incident wherein local resources are adequate and available. A Local Emergency may or may not be proclaimed. The City EOC may or may not be activated. Off-duty personnel may be recalled.

Level Two—Centralized Coordination and Decentralized Direction

A moderate to severe emergency wherein local resources are not adequate and mutual aid may be required on a regional or even statewide basis. Key management level personnel from the principal involved agencies will co-locate in a central location to provide jurisdictional or multi-jurisdictional coordination. The EOC should be activated. Off-duty personnel may be recalled.

A Local Emergency will be proclaimed and a State of Emergency may be proclaimed.

Level Three—Centralized Coordination and Direction

A major local or regional disaster wherein resources in or near the impacted area are overwhelmed and extensive state and/or federal resources are required. A Local Emergency and a State of Emergency will be proclaimed and a Presidential Declaration of an Emergency or Major Disaster will be requested. All response and early recovery activities will be directed from the EOC. All off-duty personnel will be recalled.

Specific operational concepts, to include the emergency response actions of the various elements of the Standardized Emergency Management System, are reflected in **Part Two** of this Plan.

National Security Emergencies

National security emergencies may range from minor inconveniences such as food and petroleum shortages to a worst-case scenario involving an attack on the United States utilizing nuclear weapons.

Protective measures to be employed in the event of a threatened or actual attack on the United States include:

In-place protection.

Spontaneous evacuation by an informed citizenry may be considered a viable option within the context of this plan.

HAZARD IDENTIFICATION AND ANALYSIS

A hazard analysis has indicated that the City may be at risk to certain incidents and to national security emergencies. These hazards are identified in **Part One, Section Five—Threat Assessments**, which also provide general and specific information on their possible impact on the jurisdiction.

STANDARDIZED EMERGENCY MANAGEMENT SYSTEM (SEMS)

In an emergency, governmental response is an extraordinary extension of responsibility and action, coupled with normal day-to-day activity. Normal governmental duties will be maintained, with emergency operations carried out by those agencies assigned specific emergency functions. The Standardized Emergency Management System (SEMS) has been adopted by the City of Duarte 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 response and recovery. **(CPG-55)**

Fully activated, the SEMS consists of five levels: field response, local government, operational areas (countywide), OES Mutual Aid Regions, and state government. **(SEMS-6)**

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 management are: command, operations, planning/intelligence, logistics, and finance/administration.

Local Government Level (CPG-55)

Local governments include cities, counties, and special districts. Local governments manage and coordinate the overall emergency 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.

In SEMS, the local government emergency management organization and its relationship to the field response level may vary depending upon factors related to geographical size, population, function and complexity. 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 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 System**.

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.

SEMS regulations specify that all local governments within a county geographic area be organized into a single operational area and that the county board of supervisors is responsible for its establishment. The County of Los Angeles is the lead agency for the Los Angeles County Operational Area which includes the City of Duarte. All local governments should cooperate in organizing an effective operational area, but the operational area authority and responsibility is not affected by the nonparticipation of any local government.

Activation of the Operational Area 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 the Los Angeles County Operational Area and will have the overall responsibility for coordinating and supporting emergency operations within the county. The Area Coordinator and supporting staff will constitute the Operational Area Emergency Management Staff. The County of Los Angeles EOC will fulfill the role of 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 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 response activities within the region.

State

The state level of SEMS manages state resources in response to the emergency needs of the other levels and coordinates mutual aid among the mutual aid regions and between the regional level and state level. 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 is based on an understanding of the nature of the emergency, the potential hazards, the likely response of emergency services and knowledge of what individuals and groups should do to increase their chances of survival and recovery.

Public awareness and education prior to any emergency are crucial to successful public information efforts during and after the emergency. The pre-disaster awareness and education programs must be viewed as equal in importance to all other preparations for emergencies and receive an adequate level of planning. These programs must be coordinated among local, 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 plans should include provision for training.

The objective is to train and educate public officials, emergency response personnel and the public. The best method for training staff to manage emergency 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 situations. There are several forms of exercises:

Tabletop exercises provide a convenient and low-cost method designed to evaluate policy, plans and procedures and resolve coordination and responsibilities. Such exercises are a good way to see if policies and procedures exist to handle certain issues.

Functional exercises are designed to test and evaluate the capability of an individual function such as evacuation, medical, communications or public information.

Full-scale exercises simulate an actual emergency. They typically involve complete emergency management staff and are designed to evaluate the operational capability of the emergency management system.

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. Government officials accomplish this using warning devices located within the community or mounted on official vehicles. The warning devices are normally activated from a point staffed 24 hours a day.

There are various mechanical systems in place, described below, whereby an alert or warning may originate or be disseminated. Following the description of the systems is an explanation of the "Emergency Conditions and Warning Actions" through which these system may be accessed. (CPG-97)

FEDERAL ALERTING AND WARNING SYSTEMS

EBS Emergency Broadcast System (to be converted to the Emergency Alerting System [EAS] in the near future)

The Emergency Broadcast System (EBS) 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. EBS is operated by the broadcast industry according to established and approved EBS 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 EBS operating area to broadcast a common program. Each broadcast station volunteers to participate in EBS and agrees to comply with established rules and regulations of the FCC.

EBS 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	EBS 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 EBS plans. These include:

Federal	The EBS Advisory Committee
State	State Emergency Communications Committee
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.

Signals (for informational purposes only - - this warning system is no longer used in the City of Duarte.)

Attention or Alert

The **Attention** or **Alert** signal is a three to five-minute steady tone on sirens, horns or other devices. This signal means: "An emergency situation exists or is imminent. Listen to your local or area radio or television station for essential information."

Attack Warning Signal

The **Attack Warning** signal, a three to five-minute wavering tone on sirens or a series of short blasts on horns or other devices, are repeated as often as NAWAS instructs or as local government authorities deem necessary.

The **Attack Warning** signal indicates that an actual attack against this country has been detected. This signal is used for the initial attack warning and subsequent attack warnings.

THIS SIGNAL WILL BE USED FOR NO OTHER PURPOSE Signals (For informational purposes only--this warning system is no longer used in the City of Duarte.)

AND WILL HAVE NO OTHER MEANING. Everyone should immediately protect himself and listen to the area EBS station for instructions.

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. See the "California Emergency Services Radio System, Plan and Licensing Guide," July 1990, written by OES Telecommunications Division for more information.

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 system establishes four priorities for use:

- I. Emergency Operations of law enforcement agencies, primarily mutual aid activities.
- II. Emergency or urgent operations of above, involving a single agency.
- III. Special event control activities, generally of a pre-planned nature and generally involving joint participation of two or more agencies; or two or more police divisions, stations of CHP, etc. Drills, rehearsals, command post exercises and like activities shall be considered as Priority III activities.
- IV. When no traffic of a higher priority classification is in progress, agencies participating in CLEMARS may utilize the frequency for local communications as a secondary means of communication.

The Regional Law Enforcement Coordinator is responsible for coordination of use of the system within the Mutual Aid Region. The City of Duarte does participate in CLEMARS, and is licensed for mobile and base station communications.

CLERS California Law Enforcement Radio System (Intercity Radio)

CLERS is a microwave interconnected radio repeater system with statewide coverage. It may also have been referred to locally as Intercity Radio. This system was designed for use by law enforcement agencies for point-to-point communications and to provide a backup warning system to all counties in the state. OES provides and maintains the statewide repeater system and microwave network for use by law enforcement agencies. System users are responsible for providing their own base station equipment and obtaining proper licensing from the FCC. CLERS participation is voluntary, and many agencies no longer maintain the equipment. The Telecommunications Bureau of OES is the contact for CLERS. The City of Duarte does not participate in CLERS.

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. A number of

agencies have message switching computer (MSC) systems and computer aided dispatch (CAD) systems which directly connect to CLETS. Many of these systems have mobile data terminals (MDTs) which allow an officer in the field to inquire directly into various systems located via L.A. County Sheriff's Station.

EBS Emergency Broadcast System (to be converted to the Emergency Alerting System [EAS] in the near future)

Each state has been divided into a number of EBS operational areas, consisting of one or more counties within radio reception range of EBS stations serving the area. California has thirty EBS 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 EBS 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 EBS 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 EBS 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.

(Reference: State EBS Operations Plan, Emergency Broadcast System, March 1987.)

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 Broadcast 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 uninterruptable 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

CUBE Caltech/U.S. Geological Survey Broadcast of Earthquakes

The CUBE system is the product of a cooperative effort between the California Institute of Technology and the United States Geological Survey. Earthquake data is collected at Caltech Seismological Laboratory in Pasadena and is reduced to provide earthquake time, location and magnitude. This information is then transmitted to a commercial paging system where it is broadcast to government and private sector subscribers' paging units. These pagers may be carried by personnel or connected to a personal computer that receives the information and displays it on a map. The CUBE project offers the following capabilities to government:

Automatically provides near real-time locations and magnitudes of earthquakes;

Automatically provides estimates of the distribution of ground shaking following significant earthquakes, and;

Warns of imminent ground shaking in the seconds following an earthquake, but before waves actually reach sites that may be damaged.

Subscribers within Los Angeles County government include emergency management personnel from the following departments: CAO, Sheriff, Fire and Public Works. Computers are located in each of the following locations: County/Operational Area EOC, Fire and Public Works Departmental Operations Centers.

EBS Emergency Broadcast System (to be converted to the Emergency Alerting System [EAS] in the near future)

Emergency information is broadcast directly through the South Coast Air Quality Management District (SCAQMD) transmitters (primarily used for broadcasting smog alerts) to all broadcasters in Los Angeles County simultaneously and also to others who by law must monitor this frequency (school districts and businesses with more than 100 employees). A decoder is also available to alert that an emergency broadcast is about to be transmitted to eliminate the need for constant monitoring of the frequency.

Examples of emergencies identified by Los Angeles County Operational Area which may warrant either immediate or delayed response under EBS by the broadcast industry are earthquake, serious fires, heavy rains and flooding, widespread power failures, severe industrial accidents and hazardous material accidents. The context of any emergency broadcast transmitted on EBS should be of concern to a significant segment of the population of Los Angeles County.

EBS activation can be authorized by any one of the following parties: *(CPG-99)*

City Manager

Chairman of the Los Angeles County Board of Supervisors or designate

Mayor of the City of Duarte or designate
Director of Safety Coordination
Authorized public official of the incorporated cities of Los Angeles County
Authorized representative of the National Oceanic and Atmosphere Administration (NOAA)

The Sheriff of Los Angeles County, while not the originator of the EBS material, is responsible for the content and authenticity of the information broadcast over the local EBS. Local broadcast stations have the right to edit or use any or all of an EBS broadcast. Any jurisdiction may make separate programming arrangements with any broadcast station independent of the EBS. (See **Part Three—Operations for Draft EBS [EAS] Plan for Los Angeles County, May 26, 1995**).

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 EBS voice and video broadcasts are accomplished at the Los Angeles County Operational Area Emergency Operations Center facility. (See **Part Three—Operations for ENN Administrative Policy**.)

LOCAL ALERTING AND WARNING SYSTEMS (See Part Three—Operations/Alerting and Warning for Procedures)

(CPG-96) The City of Duarte does not maintain siren systems. Other local warning systems include:

Emergency Broadcast System (EBS) (to be converted to Emergency Alerting System [EAS] in the near future)

The EBS is administered by the Sheriff of Los Angeles County. Activation of the Los Angeles County EBS 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.

Electronic News Network (ENN)

The ENN is a subset of the EBS. It is a digital format that allows messages to be sent via the State of California’s EDIS system. The digital message will be received by the media, schools, large business and anyone who monitors the AQMD channels. It is less restrictive than an EBS broadcast and can be originated by any agency with access to a JDIC terminal. It allows for routine or test messages, in addition to emergency messages.

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

(Reference: California Earthquake Advisory Plan, Oct. 1990, Section 3. Procedures on the advisory can be found in Sections 6 and 7 of this document.)

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.

(See Part Three—Operations/Alerting and Warning for sample mitigation checklists for local governments in responding to an Advisory issued by OES.)

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). (See **California Short-Term Earthquake Prediction Response Plan, Oct., 1990.**)

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, will issue the appropriate bulletins typically from Oxnard. 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 L.A. County Fire Department. Area Plans address in detail the specifics for hazardous materials planning for the local area. (Reference: **L. A. County Fire Administering Agency Plan.**)

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.

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.

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. **(See Part Three—Operations/NWS for NWS Issuances.)**

PART ONE, SECTION TWO

AUTHORITIES AND REFERENCES

GENERAL (CPG-13)

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

The Standardized Emergency Management System (SEMS) Regulations (Chapter 1 of Division 2 of Title 19 of the California Code of Regulations), hereafter referred to as SEMS, establishes the SEMS to provide an effective response to multi-agency and multi-jurisdiction emergencies in California. SEMS is based on the Incident Command System (ICS) adapted from the system originally developed by the Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) program. SEMS incorporates the use of ICS, the Master Mutual Aid Agreement and existing mutual aid systems, the Operational Area concept, multi-agency or inter-agency coordination and OASIS.

The California Emergency Plan, which is promulgated by the Governor, is published in accordance with the Act and provides overall 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 plans are, therefore, considered to be extensions of the California Emergency Plan. The 1990 California Emergency Plan is generally compatible with SEMS but will be updated.

The California Civil and Government Codes contain several references to liability release (Good Samaritan Act) for those providing emergency services. These references are contained in **Part Three—Legal Documents**.

EMERGENCY PROCLAMATIONS (See Part Three—Legal Documents)

Local Emergency (CPG-14)

A Local Emergency may be proclaimed by the City Council or by the City Manager 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 fourteen 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.

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.

NRT-1, Hazardous Materials Emergency Planning Guide and NRT-1A Plan Review Guide (Environmental Protection Agency's National Response Team).

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 (see **Part Three—Legal Documents**).

California Emergency Plan.

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

California Hazardous Materials Incident Contingency Plan.

California Health and Safety Code, Division 20, Chapter 6.5, Sections 25115 and 25117, Chapter 6.95, Sections 2550 et seq., Chapter 7, Sections 25600 through 25610, dealing with hazardous materials.

Orders and Regulations which may be Selectively Promulgated by the Governor during a State of Emergency (see **Part Three—Legal Documents**).

Orders and Regulations Promulgated by the Governor to Take Effect upon the Existence of a State of War Emergency (see **Part Three—Legal Documents**).

California Master Mutual Aid Agreement (see **Part Three—Legal Documents**).

Local (see Part Three—Legal Documents)

Duarte Municipal Code, Chapter 2.32, Emergency Organization

Resolution No. 89-12 adopting the Master Mutual Aid Agreement, adopted April 18, 1989.

Resolution No. 91-23 adopting Workmen's Compensation Benefits for Disaster Service Workers, adopted May 7, 1991.

[Agreement with the Red Cross, if any]

REFERENCES

Federal Response Plan (FEMA).

Disaster Assistance Procedure Manual (State OES).

California Emergency Resources Management Plan.

California Master Mutual Aid Agreement.

California Law Enforcement Mutual Aid Plan.

California Fire and Rescue Operations Plan.

PART ONE, SECTION THREE

HAZARD MITIGATION

PURPOSE

This section establishes actions, policies and procedures for implementing Section 409 (Minimum Standards for Public and Private Structures) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288, as amended), following a Presidentially declared Emergency or Major Disaster. It also assigns hazard mitigation responsibilities to various elements of federal, state, and local governments in California.

AUTHORITIES AND REFERENCES

Activities enumerated in this enclosure will be conducted in accordance with the enabling legislation, plans, and agreements listed in **Part One, Section Two—Authorities and References**.

GENERAL

Hazard mitigation is defined as any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards. Section 409 of Public Law 93-288 requires, as a condition to receiving federal disaster aid, that repairs and reconstruction be done in accordance with applicable codes, specifications, and standards. It also requires that the state or local government recipients of federal aid evaluate the natural hazards of the area in which the aid is to be used, and take action to mitigate them, including safe land use and construction practices.

To be effective, hazard mitigation actions must be taken in advance of a disaster. After disaster strikes, mitigation opportunities exist only during recovery, and even those opportunities can be limited by the absence of advance planning. Nevertheless, the immediate post-disaster period does present special opportunities for mitigation. Section 409 deals with the opportunities presented in a current disaster to mitigate potential hardship and loss resulting from future disasters. Thus, hazard mitigation is a continuing year-round effort and activity in which all local communities and state agencies are encouraged to prepare hazard mitigation plans that identify ways to reduce damage caused by disasters. Hazard mitigation includes such activities as:

- Improving structures and facilities at risk.
- Identifying hazard-prone areas and developing standards for prohibited or restricted use.
- Recovery and relief from loss, including insurance.
- Providing hazard warning and protecting the population.

Following a presidential disaster declaration, the Hazard Mitigation Grant Program (HMGP) is activated. The HMGP is authorized by Section 404. The program's purpose is to fund projects which are cost-effective and which substantially reduce the risk of future damage, hardship, loss or suffering resulting from a major natural disaster. Grants are available to eligible applicants in the declared areas only.

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

Section 404 funding may not be used to fund any mitigation project that might be eligible under Public Assistance or other federal programs, although it might be used to complement or enhance mitigation funded under Individual or Public Assistance. By regulation Section 404 funding is the funding of last resort.

IMPLEMENTATION

Following each Presidentially declared Emergency or Major Disaster, the Regional Director of the Federal Emergency Management Agency (FEMA) and the Governor execute a document called the Federal/State Agreement. This agreement includes appropriate provisions for hazard mitigation. Under the "typical paragraph" set out to serve this purpose, the State agrees to:

Evaluate or have the applicant evaluate specific natural hazards in the disaster area, and make appropriate recommendations to mitigate them.

Follow up with applicants to ensure that the appropriate hazard mitigation actions are taken.

Follow up with applicants to ensure that the appropriate hazard mitigation plan or plans are developed and submitted to the FEMA Regional Director for concurrence.

Review and update as necessary disaster mitigation portions of emergency plans.

A hazard mitigation officer is appointed for the state and local applicant. These individuals will constitute the hazard mitigation survey team which will:

Identify significant hazards in the affected areas, giving priority to disaster-related hazards.
Evaluate impacts of these hazards and recommend mitigation measures.

The hazard mitigation survey team uses information from Damage Survey Reports (DSRs) and visits selected sites where significant damage has occurred. The state and local representatives on the hazard mitigation survey team are responsible for ensuring that there is adequate consultation among interested federal, state, and local parties.

The hazard mitigation survey team also prepares a hazard mitigation plan which is submitted to the FEMA Regional Director through the Governor's authorized representative within 180 days after a Presidential declaration. The objectives of the plan are to:

Recommend hazard mitigation measures for local, state, and federal agencies.

Establish short and long-term planning frameworks for implementation of hazard mitigation efforts.

CONCEPT OF OPERATIONS

Each applicant is expected to use its resources and capabilities as necessary to perform emergency work, such as debris removal or emergency measures to save lives, or to protect public health and safety, or to protect property, before requesting assistance from state or federal government. Local, state, and federal preliminary damage assessments are used to identify major hazards and opportunities for hazard mitigation activities prior to a declaration of Major Disaster or Emergency. Damage survey reports shall include identification of hazards and shall recommend mitigation measures to be incorporated into the repair work.

The federal/state hazard mitigation survey team shall review applicable land use regulations, construction standards, and other appropriate hazard mitigation measures. Utilizing information from preliminary damage assessments, DSRs, and all other pertinent information, the team shall visit the sites of significant damage and shall evaluate all hazards at those sites. For each identified significant hazard the team shall include appropriate hazard mitigation recommendations.

In cases where no plans for hazard mitigation exist or are inadequate, the team shall report its findings and make recommendations to develop, improve or maintain hazard mitigation plans. Existing local and state hazard mitigation plans shall be updated and new ones developed as deemed necessary. Technical advice and assistance will be sought from federal, state and local agencies in developing new plans or updating existing plans to mitigate hazards identified. The hazard mitigation survey team shall make recommendations on any needs for new mapping or remapping of high hazard areas.

RESPONSIBILITIES

A set procedure has been established for hazard mitigation following a disaster, to avoid similar disasters in the future. Hazard mitigation measures include avoidance, reduction and land use regulations.

The FEMA Regional Director is responsible for hazard mitigation actions under the terms of the Federal/State Agreement. The Regional Director shall provide overall leadership with respect to the general administration of Section 409 to ensure that the ultimate benefits to be gained through effective hazard mitigation programs are not diminished. The Regional Director also provides technical advice and assistance.

State and local governments will be encouraged to adopt safe land use practices and construction standards. A representative of the Office of Emergency Services (OES) will be appointed by the Governor and will be responsible for state performance of hazard mitigation activities under the Federal/State Agreement.

The applicant's authorized representative, appointed locally, is responsible for local performance of hazard mitigation measures under the terms of the Federal/State Agreement. The applicant's authorized representative shall, to the extent of legal authority, implement and enforce land use regulations and safe construction practices which are agreed upon as conditions for FEMA grants or loans. Each city and county is charged with implementing and enforcing its own hazard mitigation measures.

Local Government Responsibilities

The key responsibilities of local governments are to:

Participate in the process of evaluating hazards and adoption of appropriate hazard mitigation measures, including land use and construction standards.

Appoint a Local Hazard Mitigation Officer, if appropriate.

Participate on Hazard Mitigation Survey Teams and Inter-agency Hazard Mitigation Teams, as appropriate.

Participate in the development and implementation of section 409 plans or plan updates, as appropriate.

Coordinate and monitor the implementation of local hazard mitigation measures.

PART ONE, SECTION FOUR

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 (see **Part Three—Legal Documents**), 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. (CPG-112) Mutual aid agreements exist in law enforcement, fire services, medical and public works and are currently in progress for emergency managers (EMMA).

MUTUAL AID SYSTEM (CPG-23)

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. (CPG-132) The general flow of mutual aid resource requests and resources within mutual aid systems are depicted 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 Duarte 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 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 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, 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 Duarte will make mutual aid requests through the Los Angeles County Operational Area EOC. 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 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.

CITY OF DUARTE MUTUAL AID AGREEMENTS (CPG-24)

WITH	FOR	DATE
State of California Master	Mutual Aid (Part Three, Legal Documents)	1989
Area D Civil Defense and Disaster Board	Inter-Agency Cooperation in Major Natural and Man-Made Disasters	1989
Southern California Cities and Counties (Statewide)	Public Works Mutual Aid (Part Three, Legal Documents)	1990
State of California	Emergency Managers Mutual Aid (Part Three, Legal Documents, when adopted)	coming

Chart 2 MUTUAL AID COORDINATORS FLOW CHART

Mutual Aid Coordinators: General Flow of Resource Requests and Information

Discipline-Specific Mutual Aid Systems

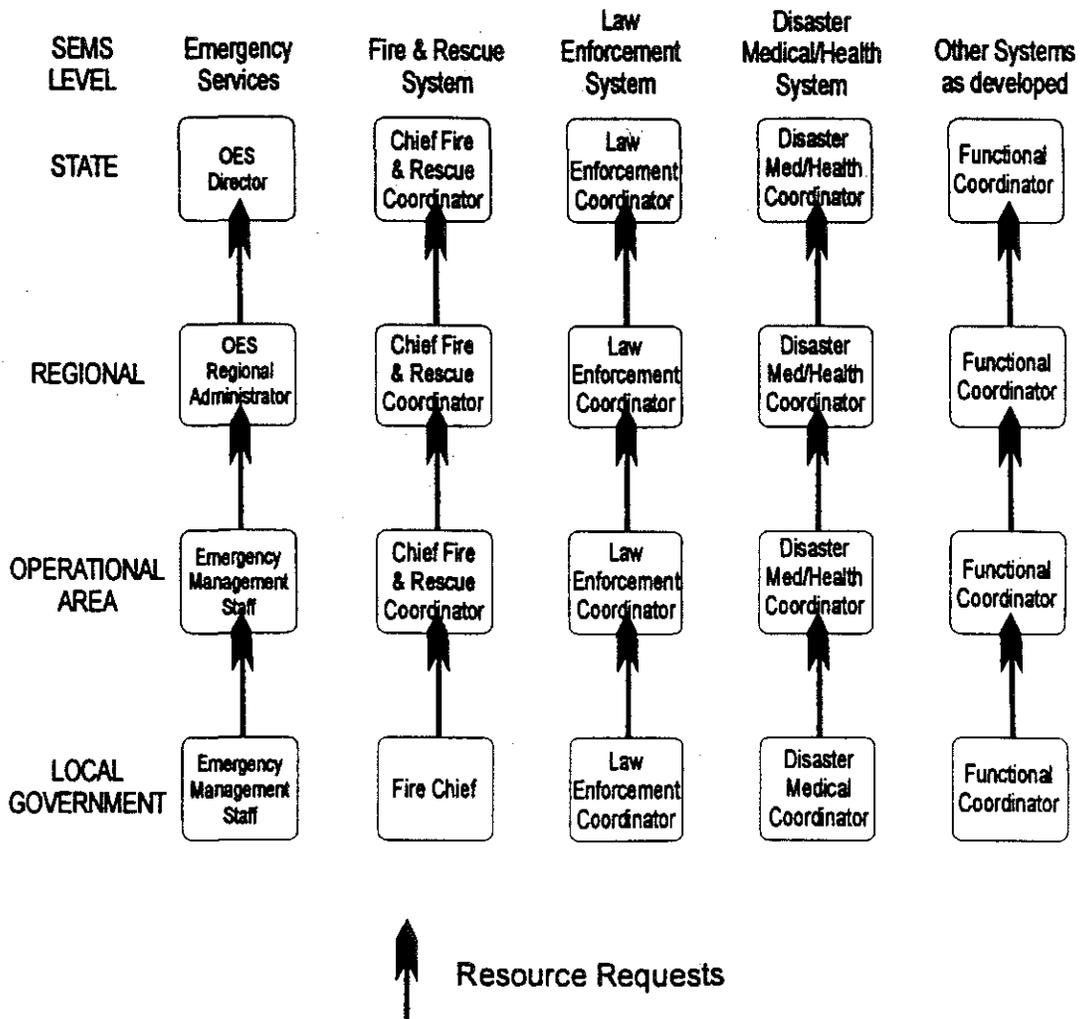
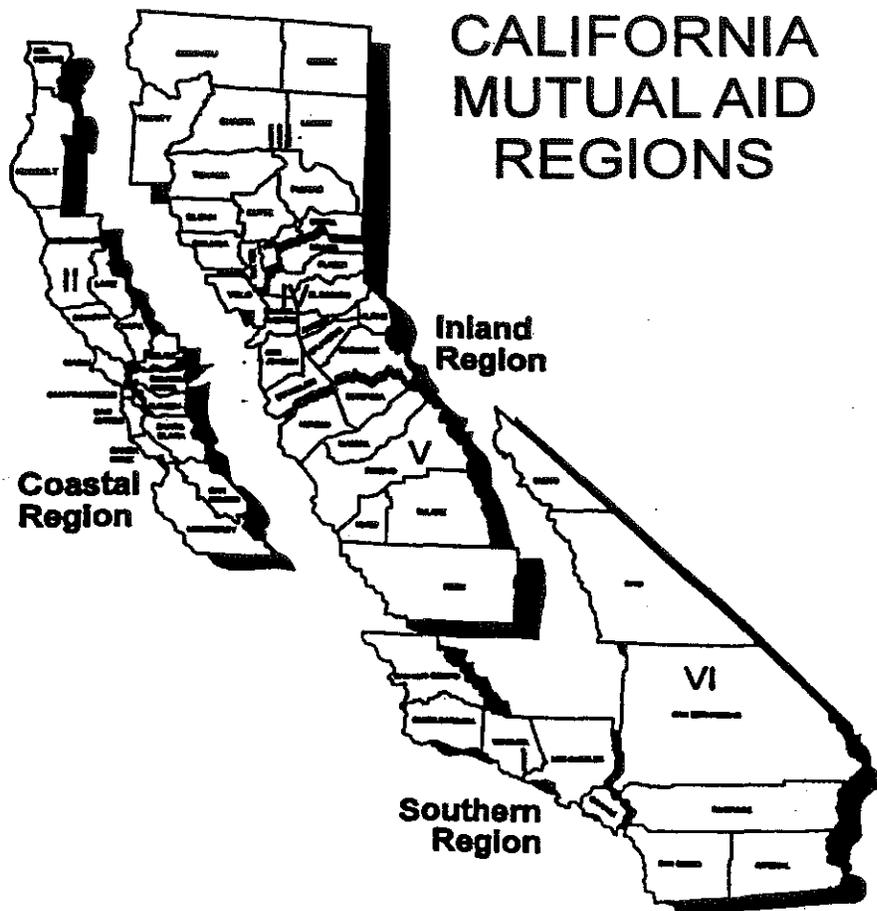


CHART 3 STATE MUTUAL AID REGION MAP



PART ONE, SECTION FIVE THREAT SUMMARY FOR CITY OF DUARTE

This section of the Basic Plan (Part One) consists of a series of threat summaries based on the results of the City of Duarte's hazard analysis. **This hazard analysis study was conducted in June 1996 by the City of Duarte. (CPG-6)** 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. For further details, refer to the Safety Element of the City's General Plan.

Geographic Characteristics, population at risk to each identified hazard, and potential hazard considerations on which the plan is based (CPG-15): The City of Duarte is located within Area D, Los Angeles County (central section), Region I, Southern Administrative Region of State Office of Emergency Services. It is located at the San Gabriel Valley. It is bounded on the north by the City of Bradbury, on the east by the Cities of Azusa and Irwindale, and on the south by the County of Los Angeles, on the west by Monrovia. It has a residential population of 22,500. Duarte consists of 6.8 square miles and is approximately 1,078 acres residential and 1,303 acres commercial/industrial. Duarte is served by the Duarte Unified School District. Water is provided by the Cal American Water District. Duarte is bisected by the north / south Route 210 Freeway and the 605 Freeway ends at the City of Duarte's southern boundary.

An earthquake could impact either segments of or the total population.

The City has some industry and faces the potential for hazardous materials incidents from the stationary hazardous materials users as well as transportation accidents, pipeline ruptures, and illegal dumping. Also, two major highways (and 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 entire City is subject to dam failure. **(CPG-229)**

The entire 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 not historically been vulnerable to storm surge inundation associated with hurricanes and tropical storms. **(CPG-229/230)**

A transportation incident such as a major air crash, 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 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

SEMS Multihazard Functional Plan

of planning at this time is restricted to assisting and expediting spontaneous evacuation. (CPG-226)

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. (CPG-7/85/172/242/243/244/245/248)

The City of Duarte is not within the planned range of a radioactive plume of a nuclear power plant. (CPG-227)

Any single incident or a combination of events could require evacuation and/or sheltering of the population. (CPG-17/208)

The City contracts for police and fire protection, and relies on the County of Los Angeles for assistance in these services. The City also contracts for its City Attorney, City Engineer, and Recreation services. (The City also relies on a local volunteer organization D.C.S. for assistance in emergency communications and other necessary emergency services.)

City staff has been designated to coordinate all SEMS functions.

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

Include maps that show jurisdiction (and surrounding jurisdictions):

High risk areas of identified hazards (attack targets, flood plains, low-lying areas susceptible to flash flood; earthquake fault zones, etc.)

Probable high risk sites (dams; high concentrations of hazardous materials production, storage and disposal facilities, etc.)

Adjacent localities that may be affected by an event in the jurisdiction.

The following threat assessments identify and summarize the hazards which could impact the City of Duarte.

Threat Assessment 1 Major Earthquake
Attachment 1 Fault Map
Attachment 2 Liquefaction Map
Attachment 3 Modified Mercalli Scale

Threat Assessment 2 Hazardous Materials

Threat Assessment 3 Urban Flooding
Attachments – Flood Inundation Area Evacuation Routes

Threat Assessment 4 Transportation — Major Air Crash
Attachments — Airport Locations

SEMS Multihazard Functional Plan

Threat Assessment 5 Transportation
Train Derailment

Threat Assessment 6 Transportation
Trucking Incident

Threat Assessment 7 Civil Unrest

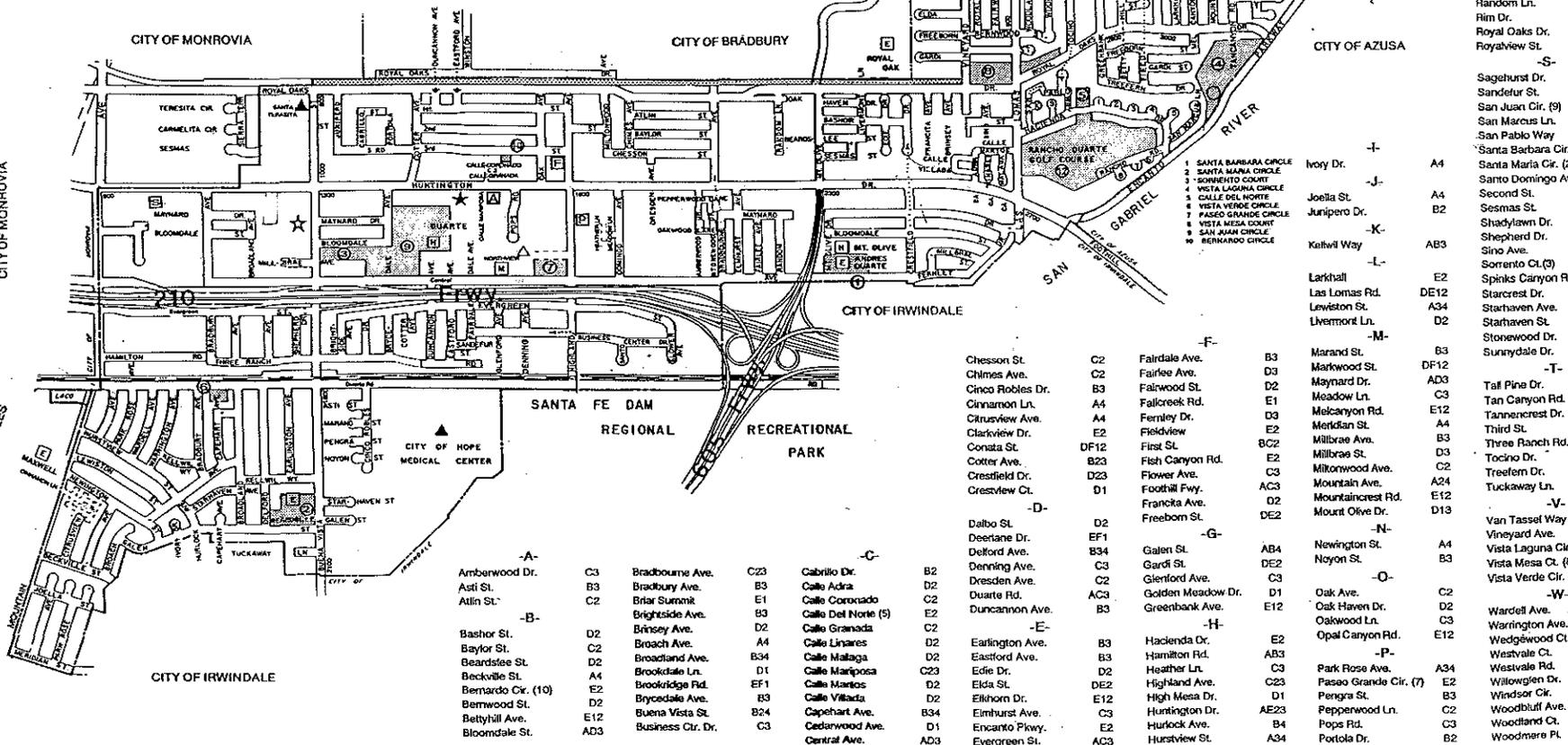
Threat Assessment 8 National Security Emergency

Threat Assessment 9 Terrorism

City of Duarte

LEGEND

- | | |
|-----------------------------|-------------------------------|
| Public Facilities | Parks & Open Space |
| ★ CITY HALL | ① ANDRES DUARTE PARK |
| ☒ PUBLIC SAFETY | ② BEARDSLEE PARK |
| 🚒 FIRE STATION | ③ DUARTE PARK |
| 📧 POST OFFICE | ④ ENCANTO PARK |
| 🎨 PERFORMING ARTS CENTER | ⑤ HACIENDA PARK |
| 📖 LIBRARY | ⑥ MOORE PARK |
| 🏛️ DUARTE HISTORICAL MUSEUM | ⑦ NORTHVIEW PARK |
| 🏥 HOSPITAL | ⑧ ROYAL OAKS PARK |
| 🏫 SCHOOLS | ⑨ SPORTS PARK |
| 🏫 ELEMENTARY SCHOOL | ⑩ THIRD STREET PARK |
| 🏫 MIDDLE SCHOOL HIGH SCHOOL | ⑪ VALLEY VIEW PARK |
| 🏫 HIGH SCHOOL | ⑫ RANCHO DUARTE GOLF COURSE |
| 🏫 SCHOOL ADMINISTRATION | |



- 1 SANTA BARBARA CIRCLE
- 2 SANTA MARIA CIRCLE
- 3 SONNETTE COURT
- 4 VISTA LAGUNA CIRCLE
- 5 CALLE DEL NORTE
- 6 VISTA VERDE CIRCLE
- 7 PASO GRANDE CIRCLE
- 8 VISTA MESA COURT
- 9 SAN JUAN CIRCLE
- 10 BERNARDO CIRCLE



NOT TO SCALE

Rancho Rd.	-R-	E2
Random Ln.	D23	D1
Rim Dr.	B2	D2
Royal Oaks Dr.		
Royalview St.		
Sagehurst Dr.	F2	B2
Sandetur St.	B3	E2
San Juan Cir. (9)	E2	E2
San Marcus Ln.	E2	E2
San Pablo Way	E2	E2
Santa Barbara Cir. (1)	E2	E2
Santa Maria Cir. (2)	E2	E2
Santo Domingo Ave.	C3	BC2
Second St.	BD2	E1
Sesmas Ln.	E1	B3
Shedlawn Dr.	D2	D2
Shepherd Dr.	E2	D1
Sino Ave.	D1	D1
Sorrento Ct.(9)	B4	B4
Spinks Canyon Rd.	B4	B4
Starcrest Dr.	C23	DE1
Starhaven Ave.	D1	D1
Starhaven St.	D1	D1
Stonewood Dr.	D1	D1
Sunrydale Dr.	D1	D1
Tail Pine Dr.	D1	D1
Tan Canyon Rd.	E2	E2
Tanncrest Dr.	EF1	BC2
Third St.	B3	B3
Thras Ranch Rd.	E2	E2
Tocino Dr.	E2	E2
Treflem Dr.	E2	E2
Tuckaway Ln.	B4	B4
Van Tassel Way	E1	D12
Vineyard Ave.	E2	E2
Vista Laguna Cir. (4)	E2	E2
Vista Mesa Ct. (8)	E2	E2
Vista Verde Cir. (6)	E2	E2
Wardell Ave.	A3	A3
Warrington Ave.	E12	D1
Wedgewood Ct.	D1	D1
Westvale Ct.	D1	D1
Westvale Rd.	D1	D1
Wilmington Dr.	C2	C2
Windsor Cir.	E12	E2
Woodbluff Ave.	E2	E2
Woodland Ct.	F2	F2
Woodmere Pl.		

THREAT ASSESSMENT 1, PART ONE

MAJOR EARTHQUAKE

1. GENERAL SITUATION

The City of Duarte is in the vicinity of several known active and potentially active earthquake faults including the San Andreas, the Sierra Madre, Raymond Hill and Duarte (*see Attachment 1, map*).

New faults within the region are continuously being discovered. Scientists have identified almost 100 faults in the Los Angeles area known to be capable of a magnitude 6.0 or greater earthquake. The January 17, 1994 magnitude 6.7 Northridge Earthquake (thrust fault) which produced severe ground motions, caused 57 deaths, 9,253 injuries and left over 20,000 displaced. Scientists have stated that such devastating shaking should be considered the norm near any large thrust earthquake.

Recent reports from scientists of the U.S. Geological Survey and the Southern California Earthquake Center say that the Los Angeles Area could expect one earthquake every year of magnitude 5.0 or more for the foreseeable future.

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 mater/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 would pose difficult problems; public health would be a major concern. Mass evacuation may be essential to save lives, particularly in areas 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 Duarte 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.

2. SPECIFIC SITUATION

The potential hazards that the City of Duarte 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.

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 pore water pressure caused by the rearrangement of soil particles induced by shaking or vibration. Liquefaction has been observed in many earthquakes, usually in soft, poorly graded granular materials (i.e., loose sands), with high water tables. Liquefaction usually occurs in the soil during or shortly after a large earthquake. In effect, the liquefaction soil strata behave as a heavy fluid. Pipelines passing through liquefaction materials typically sustain a relatively large number of breaks in an earthquake.

3. DAMAGE TO VITAL PUBLIC SERVICES, SYSTEMS AND FACILITIES

Bed Loss in Major Hospitals

Duarte has two (2) major medical facilities. 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 are expected to be lost due to structural damage. This will impair the number of beds available and create the need for several field hospitals. Most of the subscribing hospitals to the Los Angeles County Department of Health will be controlled by the Department as to the availability of beds and transfer of patients.

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

Communications

Telephone systems will be affected by system failure, overloads, loss of electrical power and possible failure of some alternate power systems. Immediately after the event numerous failures will occur coupled with saturation overloads. This will disable up to 80% of the telephone system for one day.

In light of the expected situation, emergency planners should not plan on the use of telephone systems for the first few days after the event.

Radio systems are expected to be 40 to 75% effective; microwave systems, 30% effective, or less.

Dam and Flood Control Channels

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 damage. Pumping stations in coastal communities are expected to fail due to liquefaction.

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. Many connections to major water sources may be out and storage facilities would have to be relied on; water supply could vary from little or none to inadequate. First response from fire personnel is expected to be assessment of the area to establish what is needed to determine response and recovery needs. Operations may take days because of the disruption of transportation routes for fire department personnel and equipment. The City of Duarte contracts with Los Angeles County Fire Department for fire services and can expect the equipment located in the City at the time of the event to be available for the City.

Secondary responses by the Fire Service after assessment will be placed upon diversion of resources 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. 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

Damage to natural gas 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.

Petroleum Fuels

Most major pipelines cross the San Andreas Fault, and pipeline breakage is expected. Although refineries located on poor soil may be damaged, all of the major oil refineries in the region are likely to survive. Older pipelines in this area are located in areas of poor soil stability. There is a possibility of fire where pipeline failures occur. Priorities will have to be established to assure adequate fuel for emergency crews. Ruptures of numerous lines due to fault breaks on the Newport-Inglewood are most likely. Fire is a serious threat if leaking products are ignited. All the oil refineries in the Los Angeles area are subject to earthquake damage. Some harbor water areas will be covered with leaking petroleum products due to pipe damage; this can create a serious fire problem.

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 both 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 to overpass to freeway overpass structures.

Sanitation Systems

Many of the wastewater treatment facilities could be out of service from 4-6 months depending on the damage caused by the severity of intensity and liquefaction. There is a limited volume of storage available in the wastewater treatment plants; if the treatment train cannot be restored before storage is exceeded, the wastewater 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 danger of excessive collection of explosive gas in sewer mains, and flow of untreated sewage in some street gutters. Many house sewer connections will break and plug.

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.

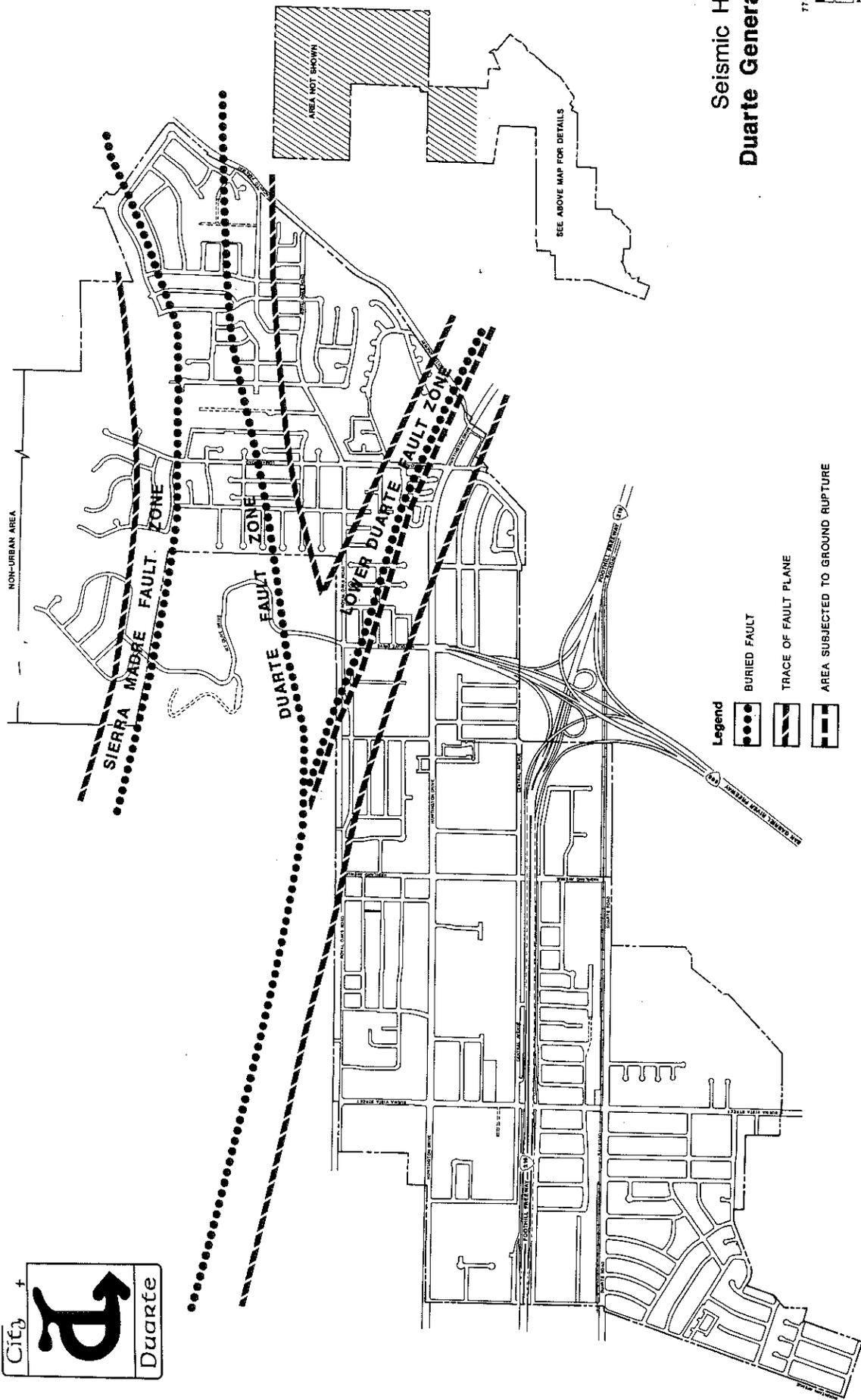
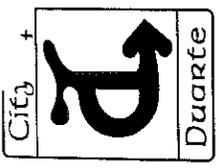
Water availability and distribution for needed life support, to treat the sick and injured and for fire suppression activities is of **MAJOR** concern to each community.

4. EMERGENCY RESPONSE ACTIONS

Emergency response action area contained in the Multi-Hazard Functional Plan.

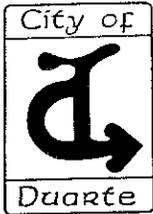
Attachments:

- 1 - Fault Maps
- 2 - Seismic Hazard Area
- 3 - Modified Mercalli Intensity Scale



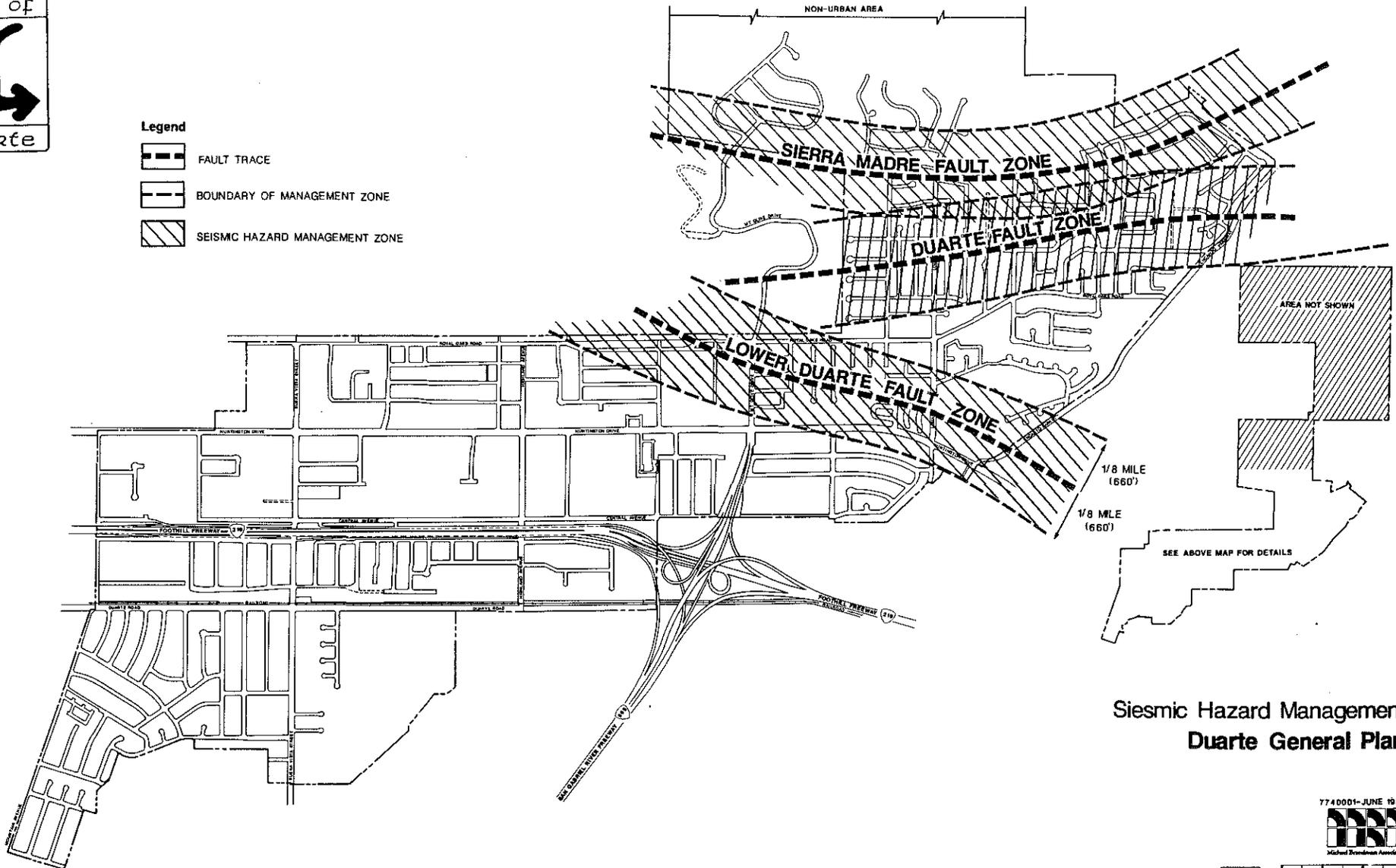
Seismic Hazards Duarte General Plan

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EXHIBIT 7-5



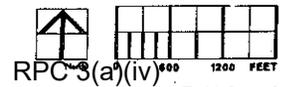
Legend

-  FAULT TRACE
-  BOUNDARY OF MANAGEMENT ZONE
-  SEISMIC HAZARD MANAGEMENT ZONE



**Siesmic Hazard Management
Duarte General Plan**

7740001-JUNE 1989



RPC-3(a)(iv)

Exhibit 7-2

ATTACHMENT 2, THREAT SUMMARY 1

MODIFIED MERCALLI INTENSITY SCALE

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

Frame structures, if not bolted, shifted off foundations. Frames cracked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluviated areas, sand and mud ejected, earthquake fountains, sand craters.

- X** Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly.
- XI** Rails bent greatly. Underground pipelines completely out of service.
- XII** Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air.

Definition of Masonry A, B, C, D:

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

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

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

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

THREAT ASSESSMENT 2, PART ONE

HAZARDOUS MATERIAL INCIDENT

1. GENERAL SITUATION

Hazardous Materials are any substance or combination of substances which because of quantity, concentration, or characteristics may cause or significantly contribute to an increase in death or serious injury, or pose substantial hazards to humans and / or the environment. The production and use of these hazardous materials is a part of our society over which local governments have little control.

Releases of explosive, caustic and flammable materials have caused injuries and deaths and necessitated large-scale evacuations. Toxic chemicals in gaseous and liquid form have caused injuries among emergency response personnel as well as passersby. When toxic materials have entered either surface, ground or reservoir water supplies, serious health effects have resulted. Releases of hazardous chemicals can be especially damaging when they occur in highly populated areas or along transportation routes used simultaneously by commuters and hazardous materials haulers.

2. SPECIFIC SITUATION

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

3. TRANSPORTATION ACCIDENTS

Chemicals are often transported through Duarte on two rail lines, Santa Fe and Southern Pacific, and on two surface street truck routes. Arrow Highway traverses east-west through the southern part of town. Foothill Boulevard traverses east-west through the northern part of town. Foothill Boulevard is heavily used because the 210 Freeway ends and most of that freeway traffic continues onto Foothill Boulevard.

4. BUSINESS USER ACCIDENTS

The City home to a number of small chemical users such as school laboratories and department stores with supplies of pool chemicals, etc.

5. 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 can be anticipated that illegal dumping of hazardous materials will increase proportionately.

EMERGENCY RESPONSE ACTIONS

Emergency response actions applicable to all common hazards are presented in the **Checklist Actions in Part Two of this Plan**. Refer to your jurisdiction's Administering Agency Plan for Specific

SEMS Multihazard Functional Plan

information. Appropriate facility listings and maps are contained in that plan. (CPG-16b/d)

Attachments: (as applicable)

THREAT ASSESSMENT 3, PART ONE

URBAN FLOODING

1. GENERAL SITUATION

Portions of the City of Duarte are prone to urban flooding, also sometimes referred to as ponding, due to debris accumulation on storm drains and in flood control channels and basins and aged drainage systems. Low-lying areas of the City are particularly susceptible to urban flooding.

Flood control channels and basins are at risk of overflowing their banks during times of heavy rainfall and reservoir water release, specifically the San Gabriel River Basin, which runs along the east side of the City. The Los Angeles County Department of Public Works and the Army Corp of Engineers are responsible for notifying the jurisdiction at the onset of planned water releases.

2. SPECIFIC SITUATION

The following areas are considered at risk due to urban flooding:

- **Huntington Drive** d north side, west of Buena Vista Street
- **Encanto Parkway** (City of Azusa jurisdiction) d north of Huntington Drive
- **Central Avenue** d north side, east of Santo Domingo Avenue
- **Buena Vista Street** d east side, south of Galen Street

The problem areas are considered to be a hazard only to their specific location and are not expected to threaten or endanger the lives of persons in the surrounding areas.

Health hazards could present themselves to residential dwellings and businesses in the affected areas if proper flood clean-up actions are not conducted immediately. Contamination due to flooded sewage systems pose the greatest risk to health and safety of persons in the affected areas.

3. EMERGENCY READINESS STAGES

Flooding in the identified risk areas can occur rapidly or slowly depending on the heaviness and severity of rainfall.

Emergency preparedness will be based on four stages of response actions.

Stage I (Watch Stage)

Light to moderate rain for indefinite period. All field units (Public Works, Police, Fire Depts., etc.) are to review their procedures for flood incidents.

Stage II

Moderate to heavy rain expected for next four (4) to six (6) hours. Public information on location of sand bags, sand and flood clean-ups kits to be prepared and distributed to appropriate departments.

Stage III (*Advisory Stage*)

Continuation of heavy rain over next six (6) to twelve (12) hours. Identified risk areas should be closed to traffic. Public information to be distributed to residents and businesses in affected areas by all available field units.

Stage IV

Safety/Health threat to private property and persons. Areas should be evacuated should flooding constitute a safety or health hazard.

4. EVACUATION ROUTES

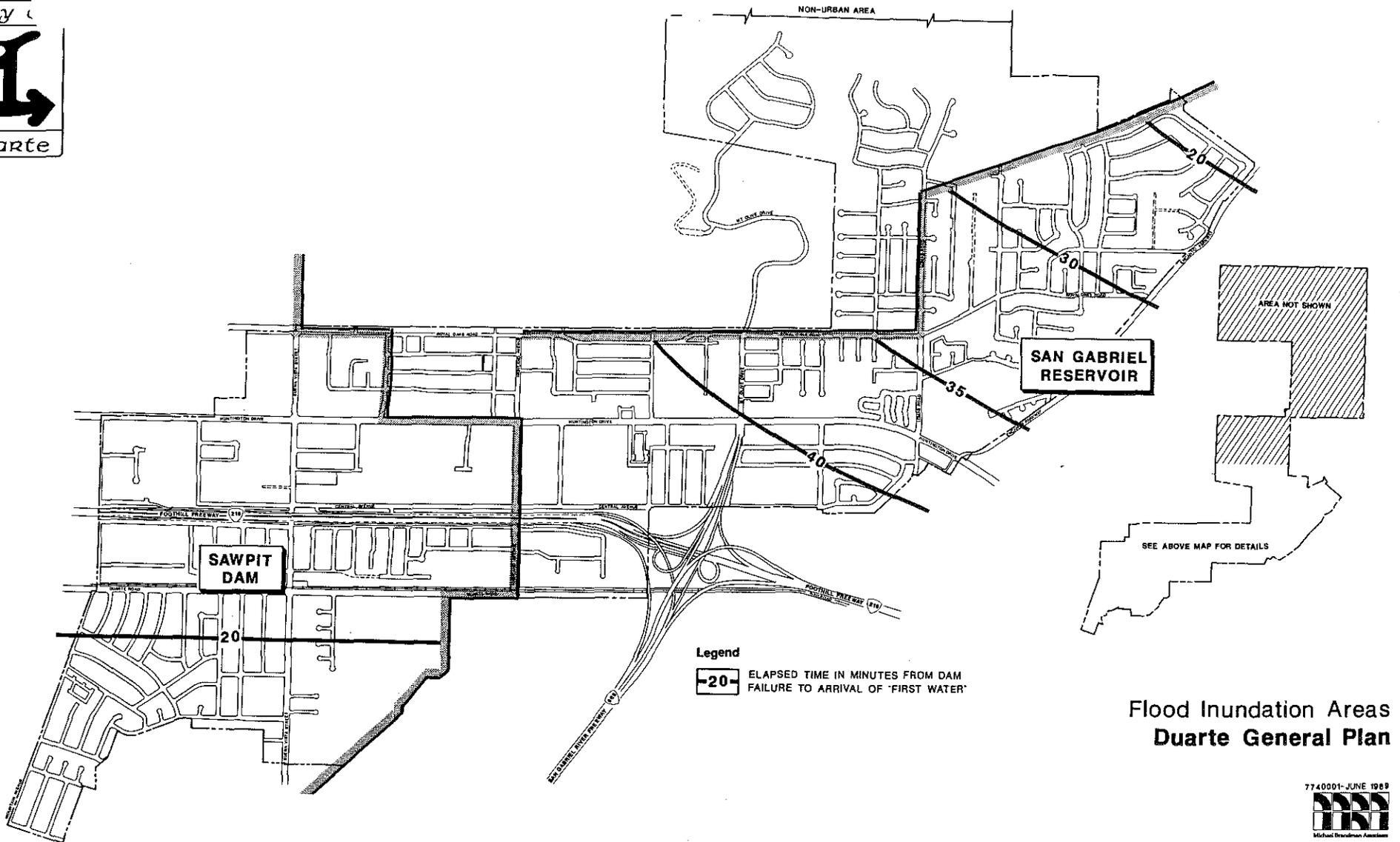
It is expected that most streets will remain open. Should it become necessary, evacuations should be easily facilitated. Other pertinent information relating to evacuation operations are in **Part Two, Operations Section**.

5. 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 - Urban Flooding Hazard Map (CPG-16a)

Attachment 2 - Map of Evacuation Routes



Flood Inundation Areas Duarte General Plan

7740001-JUNE 1989



Michael Brundman Associates

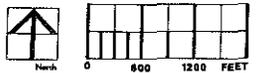
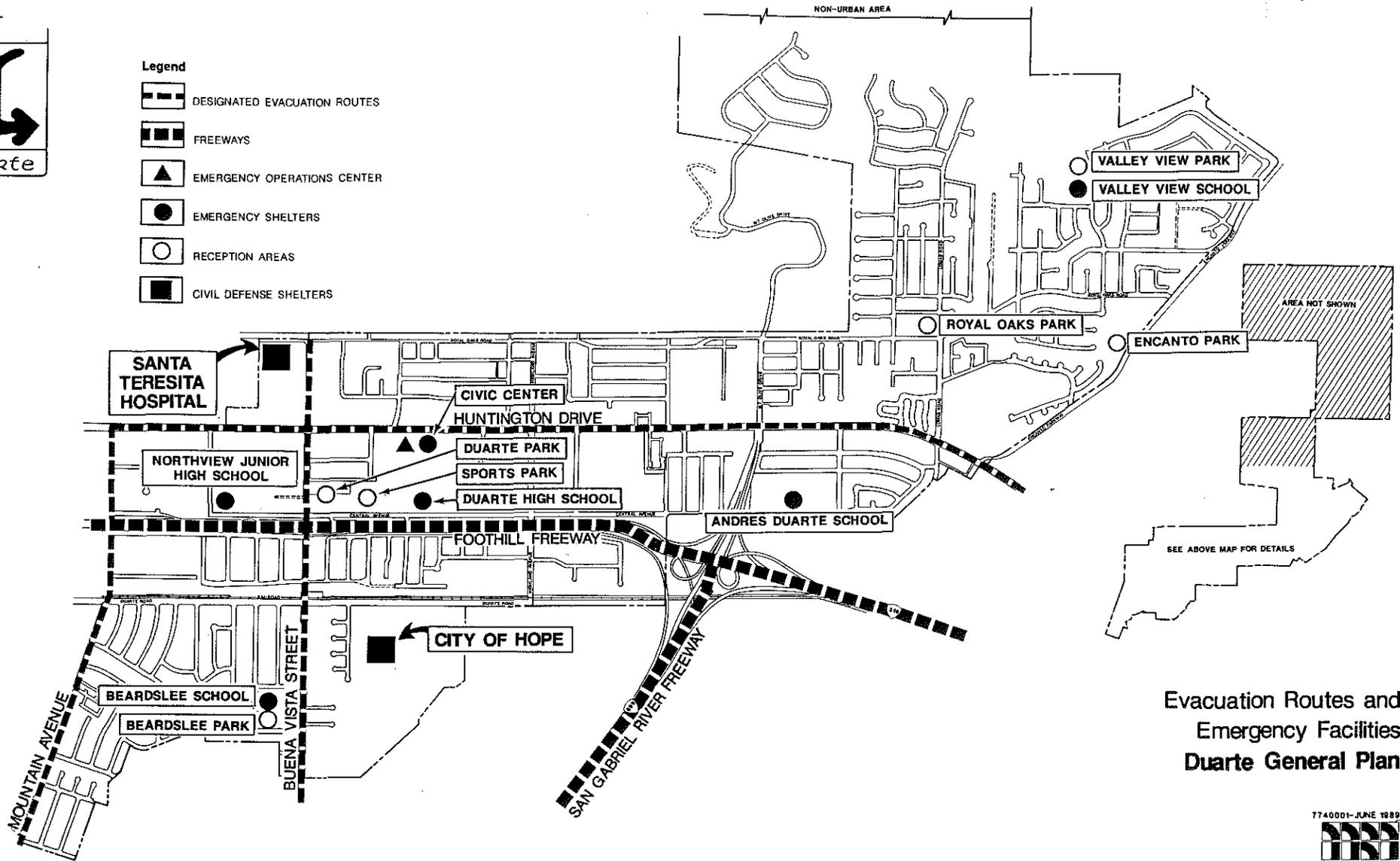


Exhibit 7-6



- Legend**
- DESIGNATED EVACUATION ROUTES
 - FREEWAYS
 - EMERGENCY OPERATIONS CENTER
 - EMERGENCY SHELTERS
 - RECEPTION AREAS
 - CIVIL DEFENSE SHELTERS



**Evacuation Routes and
Emergency Facilities
Duarte General Plan**

7740001-JUNE 1989

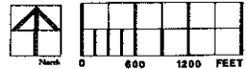


Exhibit 7-3

THREAT ASSESSMENT 3, PART TWO DAM FAILURE

GENERAL SITUATION

Dam inundation is defined as the flooding which occurs as the result of structural failure of a dam. Structural failure may be caused by seismic activity. Seismic activity may also cause inundation by the action of a seismically induced wave which overtops the dam without also causing dam failure. This action is referred to as a seiche. Landslides flowing into a reservoir are also a source of potential dam failure or overtopping.

SPECIFIC SITUATION

The three major dams which could have significant impact on the City of Duarte in the event of a dam failure are San Gabriel Dam, Morris Dam, and Sawpit Dam. None of these dams are located in the City.

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. Additional information is contained in the specific Dam inundation Contingency Plans prepared for each of the dams.

San Gabriel Dam and Morris Dam

Description and Location: San Gabriel Dam and Morris Dams are owned and operated by the Los Angeles County Department of Public Works. They are located in Los Angeles County on the San Gabriel River approximately 6 miles and 4 miles north of the City of Azusa.

San Gabriel Dam: Should a breach in the San Gabriel dam occur, the water released would flow in a southerly direction toward Morris Dam. Depending on the water level at Morris Dam, the additional flow could breach the top of Morris dam and flow into the San Gabriel River. Should flooding occur, it would be identical to the scenario described below.

Morris Dam: Should a breach in Morris Dam occur, flooding within the City limits would be highly likely. The flood wave would reach Duarte approximately 20 minutes. The flood wave would continue to move through Duarte, inundating the northeast residential section of the City first and travel in a southwesterly direction through the east 2/3rd of the City. *(It should be understood that the City would not be simultaneously inundated).* *The inundated area affected by a breach of Morris Dam is comprised of commercial, industrial, schools, residential, and a hospital.*

EMERGENCY RESPONSE ACTIONS

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

EVACUATION ROUTES

Pertinent information relating to evacuation operations are included in **Part Two, Operations Section of this plan.**

Attachment 1 - Dam Inundation Map _____ **Dam (CPG-16b)**

THREAT ASSESSMENT 4, PART ONE TRANSPORTATION: Major air Crash

1. GENERAL SITUATION

A major air crash that occurs in a heavily 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 resulting 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 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.

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 airspaces, air crash incidents are no longer a probability, but a reality. Therefore, air crash incidents must be included among other potential disasters.

2. SPECIFIC SITUATION

The City of Duarte is located in the northeast portion of Los Angeles County. The City is comprised of residential, commercial and industrial areas. The City contains major freeway systems such as the Interstate 605 on the east and Interstate 210 on the south. Duarte is not along the major flight path for commercial airlines, however, many small airports are located within a 30 mile radius of the City.

The large commercial airports nearest to Duarte which handle the greatest amount of air traffic are as follows:

The Los Angeles International Airport (LAX)—It is the fourth busiest airport in the world and has experienced a four percent air traffic growth rate. Planes arrive and depart at a rate of one per minute.

The Long Beach Airport—It is ranked the 12th busiest airport nationally in terms of air traffic that it handles and is experiencing a 0.5 percent decrease in the rate of traffic. Planes arrive and depart at a rate of 1.5 every two minutes.

The John Wayne Airport—It is ranked 10th nationally in terms of air traffic that it handles and has experienced a six percent growth increase in 1993 and is only projected to increase slightly in 1994.

The Ontario Airport—It is ranked 46th busiest airport nationally in terms of air traffic that it handles and is experiencing a three percent growth rate which is projected to continue.

The Burbank Airport—It is ranked 53rd busiest airport nationally in terms of air traffic that it handles and has experienced a 9.4 percent growth rate since 1993. Also, airport hours of operation are restricted to 7:00 AM to 10:00 PM.

Local Airports Include:

El Monte Airport

Brackett Field

La Verne

Upland

Chino

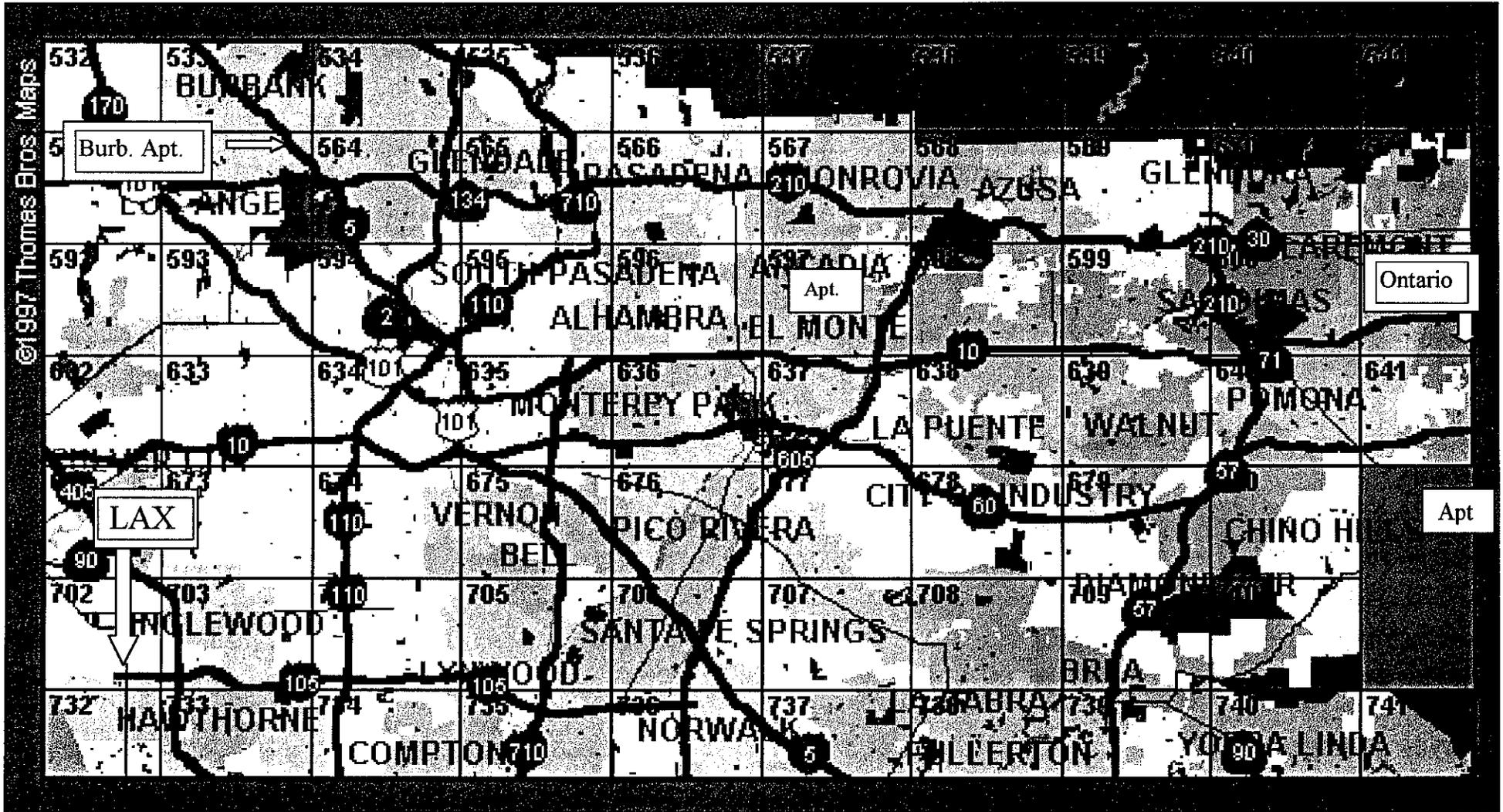
Aircraft flying in the vicinity of Duarte are located in the Los Angeles Terminal Control Area (TCA). The TCA is airspace restricted to large, commercial airliners. Each TCA has an established maximum and minimum altitude in which a large aircraft must travel. Smaller aircraft may then proceed to transit 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 their locations. If a pilot is unfamiliar with the 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.

2. EMERGENCY RESPONSE ACTIONS

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

Attachment 1 – Map of Airport Locations

AIRPORT LOCATIONS – MAJOR AND LOCAL



ASSESSMENT 5, PART ONE

TRANSPORTATION: TRAIN DERAILMENT

1. GENERAL SITUATION

A major train derailment that occurs in a heavily populated area of homes and industrial activity can result in considerable loss of life and property. As a train leaves its track, there is no longer any control as to the direction it will travel. Potential hazards could be overturned rail cars, direct impact into homes, industrial building or entering into normal street traffic.

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

2. SPECIFIC SITUATION

The City of Duarte has one railroad line, owned by the Metropolitan Transit Authority. The MTA purchased the railroad right-of-way from the Atchison, Topeka and Santa Fe railroad Co. in anticipation of extending their MetroRail system. Due to budgetary difficulties, this portion of their system has been delayed indefinitely. Currently, the railroad line is receiving one or two freight trains per day.

3. EMERGENCY RESPONSE ACTIONS

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

THREAT ASSESSMENT 6, PART ONE TRANSPORTATION: TRUCKING INCIDENT

GENERAL SITUATION

A major truck incident that occurs in a heavily 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 of Duarte is located within the northeast section of Los Angeles County. It is served by two major freeways. Trucks are restricted to identified truck routes and are restricted to a maximum weight of 7 tons. This restriction greatly reduces the amount of through truck traffic within the city.

EMERGENCY RESPONSE ACTIONS

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

THREAT ASSESSMENT 7, PART ONE

CIVIL UNREST

GENERAL SITUATION

The spontaneous disruption of normal, orderly conduct and activities in urban areas, or outbreak of rioting or violence that is of a large nature is referred to as civil unrest. Civil unrest can be spurred by specific events, such as large sporting events or criminal trials, or can be the result of long-term 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. This is the time period when civil unrest can grow to large proportions.

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

SPECIFIC SITUATION

Many cities within the Los Angeles Basin have faced civil unrest in various forms since the Watts Riots of 1964. The city of Duarte experienced similar incidents during the early 1970's at the local high school.

The entire City, consisting of residential, industrial and commercial properties, is vulnerable to the effects of civil unrest.

EMERGENCY RESPONSE ACTIONS

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

THREAT ASSESSMENT 8, PART ONE

NATIONAL SECURITY EMERGENCY

1. 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.

In the event of an attack on the United States, numerous communities in Southern California may be subjected to the effects of war. Although there are various categories of warfare, such as chemical, biological, conventional and nuclear, this threat assessment will address only a nuclear attack. Biological and chemical threat summaries may be added at some future time when more information is known regarding the threat and protective countermeasures. Conventional war effects are similar to nuclear weapons blast and fire effects, although to a much lesser degree.

This summary will address weapons characteristics, height of burst (HOB) options, weapons effects. Actual targets, size of weapons, and type of attack will be determined by the goals and objectives of the attack.

In the event of an attack on the United States, it is almost certain that many communities in Southern California would be targeted. Emergency services planners should analyze how such attacks might affect their community and take actions to prepare for these contingencies. *The following weapon information is provided to assist the planners in their task.*

2. NUCLEAR WEAPONS

Weapon Weight and Height of Burst (HOB) Options

Nuclear weapons vary in size from a few kilotons to well over a megaton. However, it has been generally agreed upon that weapons ranging from 100 kilotons to one megaton will be used for most strategic strikes. They will be the basis used when describing weapons effects later in this summary.

NOTE: One Kiloton nuclear energy is equivalent to 1000 tons of TNT energy.

Height of burst is selected taking into consideration the size of weapon to be used, the type of target and the mission objectives. There are several height of burst classifications, but in all likelihood, only three types will be used. They are high altitude, air and surface bursts. Described below are the three burst options and principle effects.

High Altitude

Weapons detonated above 100,000 feet are considered to be high altitude bursts. Nuclear weapons detonated at this altitude cause an effect known as electromagnetic pulse (EMP).

It is very effective for disrupting or destroying electrical and communication systems over many thousands of square miles. It is anticipated that several one megaton weapons will be used for this purpose.

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 for air burst targets. Air bursts are used against targets such as industrial facilities, power plants, refineries, airfields, ports and other above ground non-hardened targets. Optimum burst height is determined by the weapon size, type of target, number and distribution of targets, and geological considerations.

Surface Burst

A nuclear detonation is considered to be a surface burst when the fireball generated touches the surface of the earth. For special mission objectives, there are variations of the surface burst, including water bursts, under-water bursts and underground bursts.

Surface bursts are selected for specific targets just as air bursts are. Generally, they will be used when very high over-pressure is required to destroy hardened targets such as missile silos, runways, underground missile control centers, etc. Surface bursts also 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.

Weapons Characteristics and Effects

Detonation of a nuclear weapon 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, extreme heat is generated causing a tremendous pressure to be developed, which expands rapidly 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 be equalized. 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 by over-pressures of between 1.5 and 2 psi.

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 phenomena can initiate fires as well as produce casualties. A 1 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 1 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

Radioactive fallout is produced from vaporized fission materials, induced radioactive elements from remaining weapon components and thousands of tons of surface debris. The debris is drawn into the rising fireball, where it is mixed together and coated with highly radioactive vaporized fission products. As the fireball rises high into the atmosphere, the vaporized products are cooled and changed into solid radioactive particles of various sizes. The particles then begin their fall back to earth from altitudes of 80,000 feet or more. The particles are deposited in a downwind direction from the point of detonation, with the heavier ones falling first, and the lighter ones traveling greater distances. Radiation danger associated with fallout decreases as the radioactive elements decay. Decay rates for the various elements range from minutes to many, many years.

Attachment 3 shows idealized contour patterns and time of peak dose rates of radioactive fallout from various weapons sizes. True contour patterns would likely be considerably different as earth terrain is not perfectly smooth, but varies considerably. This would tend to make the patterns irregular in shape as well as reduce the amount of radiation as is shown for a true infinite plane surface.

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 on humans.

3. EMERGENCY RESPONSE ACTIONS

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

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

The population risk is 21,279 night-time residents and approximately 30,000/or slightly more, during the day time. The City has insufficient fallout shelter spaces for its residents. The fallout shelter identification program is no longer maintained and utilized within the State of California.

THREAT ASSESSMENT 9, PART ONE TERRORISM

GENERAL SITUATION

Terrorism is defined as the use of fear for intimidation, usually for 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 a nearly limitless number of potential targets, depending on the perspective of the terrorist. Some of these targets include: abortion clinics, religious facilities, government offices, 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.

SPECIFIC SITUATIONS

To conduct a threat assessment for a particular City, the planner must consider a great variety of situations:

What groups might exist or operate within my City:

- Right wing groups
- Ethnic groups with ties to international terrorists
- Anti abortion extremists

What are the obvious structural targets:

- Government
- Religious
- Racial or of a specific national origin
- Business
- Public infrastructure

What are the significant dates to a particular terrorist group:

- April 19th (Waco, OK Bombing, etc.)
- Dates significant to religious or racial groups

What are the potential personal targets:

- Government officials
- Religious or ethnic leaders
- Business persons
- Visiting dignitaries

- Leaders of radical groups

What special events are held that might be a terrorist target:

- Conventions or meetings
- Newsworthy trials
- Religious or ethnic festivals

EMERGENCY READINESS STAGES

Because a terrorist attack is generally sudden and without any prior warning, there are no stages of Emergency Readiness.

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