Section 1 - Introduction

Table of Contents

Executive Summary **2**
Definition of Hazard Mitigation **2**
Purpose of this Plan **3**
Plan Adoption **3**
Process 3
Adoption Resolution 4
Ongoing Maintenance and Procedures 7
Legal Authority **7**
Federal Laws 7
State Laws 8
Local Codes & Ordinances 9
Other References 9
City of Paramount Identified Mitigation Constraints **9**
Constraints 9
Economic Development 10
Background 10
Constraints & Opportunities 10

Section 1 - Introduction

Executive Summary

To summarize, this document contains:

- The City of Paramount Hazard Vulnerability Analysis;
- Prioritization of City of Paramount Hazards for mitigation activities;
- Hazard Mitigation Strategy Goals and Objectives;
- City-wide Hazard Mitigation efforts and plan input;
- Coordination with local interest groups and citizens;
- Proposed strategies and actions to reduce short and long term vulnerability to the identified hazards; as recommended by the City of Paramount Multi-Hazard Mitigation Steering Committee, its sub-committees and the general public
- Methods of implementing, monitoring, evaluating, and updating this DMA 2000 Hazard Mitigation Plan;
- Constraints to implementing Hazard Mitigation strategies and recommendations;
- The establishment of the City of Paramount Multi-Hazard Mitigation Steering Committee to assist in the further development, prioritization and implementation of the recommended Hazard Mitigation strategies.

This document also provides a framework for the identification and coordination of Hazard Mitigation strategies developed in the City of Paramount with other plans; especially those developed by City departments, agencies and organizations as well as those plans developed in order to file for Federal disaster assistance, as required by P.L. 106-390 (as amended) of the Disaster Mitigation Act of 2000.

Definition of Hazard Mitigation

Hazard Mitigation is any sustained action taken to eliminate or reduce long term risk to human life, property and the environment posed by a hazard.

Hazard Mitigation Planning is the process of developing a sustained course of action taken to reduce or eliminate long-term risk to people and property from both natural and technological hazards and their effects. The planning process includes establishing goals and recommendations for mitigation strategies.

Mitigation may occur during any phase of a threat, emergency or disaster. Mitigation can and may take place during the *preparedness* (before), *response* (during), and *recovery* (after) phases.

The process of hazard mitigation involves evaluating a hazard's impact and identifying and implementing actions to minimize or eliminate the impact.

Purpose of this Plan

The purpose of this plan is to integrate Hazard Mitigation strategies into the day-to-day activities and programs of the City of Paramount.

This plan identifies and evaluates specific strategies to be considered by the City of Paramount and its agencies. It offers a City-wide support document as well as a planning support tool for those strategies developed by the City's political subdivisions, agencies, departments, special districts and organizations.

The strategies presented are deemed appropriate and effective by recommendation of the City of Paramount Multi-Hazard Mitigation Steering Committee and the City's agencies, departments and private groups.

Upon acceptance by the California Governor's Office of Emergency Services (OES) and the Federal Emergency Management Agency (FEMA), selected strategies will be considered, based on available funding, for developing and implementation by the designated lead City agencies and departments. This plan describes the potential sources of Hazard Mitigation Strategy funding, and general procedures to obtain that funding.

This plan is based upon the City of Paramount Hazard Vulnerability Analysis (HVA) that considers natural, technological, and human-caused risks to which the City and its political subdivisions are vulnerable. The plan describes strategies that government and private sector organizations may utilize to develop their capabilities to mitigate those hazards.

It is understood that the mitigation strategies adopted in this plan are recommendations only, and they must be approved by the Mayor and City Council and funded in order to be implemented as official Hazard Mitigation Strategies.

Plan Adoption

Process

The Hazard Mitigation Plan Draft will be reviewed, and approved by the City of Paramount Hazard Mitigation Steering Committee and forwarded to the State of California for a courtesy review for potential approval and completeness. After successfully passing the State of California courtesy review the plan will be forwarded to the Paramount City Council for consideration and adoption on behalf of the City.

The adopted Plan will be re-submitted to the State of California for final review, approval and forwarding to FEMA for review and approval.

Adoption Resolution

The City of Paramount Hazard Mitigation Plan was adopted by the City Council on October 5th, 2004. The resolution follows:

City of Paramount
Los Angeles County, California

RESOLUTION NO. 04:030

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF PARAMOUNT AUTHORIZING THE SUBMITTAL OF THE CITY OF PARAMOUNT'S HAZARD MITIGATION PLAN

WHEREAS, the United States Congress enacted the Federal Disaster Mitigation Plan during the 2000 session, and as amended subsequently, which mandates that every governmental jurisdiction shall conduct an assessment of potential natural hazards; and

WHEREAS, the City of Paramount is a governmental entity; and

WHEREAS, the Plan shall be periodically reviewed at least once every five years, and that the City Manager or his designee shall be authorized to make any amendments or changes to its Plan which are indicated by the review; and

WHEREAS, the Plan must be adopted by the City Council, and filed with the Federal Emergency Management Agency; and

WHEREAS, the City has therefore, prepared a Hazard Mitigation Plan; and

WHEREAS, the City of Paramount did prepare and shall file said Plan with the Federal Emergency Management Agency.

NOW, THEREFORE, BE IT RESOLVED, by the City Council of the City of Paramount as follows:

1. The Hazard Mitigation Plan is hereby adopted and ordered filed with the City Clerk;

2. The City Manager or his designee is hereby authorized and directed to file the Hazard Mitigation Plan with the Federal Emergency Management Agency.

PASSED, APPROVED, and ADOPTED by the City Council of the City of Paramount on this 5th day of October, 2004.

Manuel E. Guillen, Mayor

ATTEST:

Lana Chikami, City Clerk

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STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF PARAMOUNT)

I, Lana Chikami, City Clerk of the City of Paramount, California, DO HEREBY CERTIFY that the foregoing **RESOLUTION NO. 04:030** was duly approved and adopted by the City Council of the City of Paramount at their meeting held on **October 5, 2004,** and said resolution has been signed by the Mayor and attested by the City Clerk, and that the same was approved and adopted by the following vote, to wit:

AYES:	COUNCILMEMBERS:	Hofmeyer, Lemons Vice Mayor Martinez, Mayor Guillen
NOES:	COUNCILMEMBERS:	None
ABSENT:	COUNCILMEMBERS:	Daniels
ABSTAIN:	COUNCILMEMBERS:	None

Dated: October 6, 2004

Lana Chikami, City Clerk

(SEAL)

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CERTIFICATION

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss.
CITY OF PARAMOUNT)

I, Lana Chikami, City Clerk of the City of Paramount, California, DO HEREBY CERTIFY that the attached document is a true and correct copy of City of Paramount **Resolution No. 04:030** adopted by the City Council of the City of Paramount at their meeting held on **October 5, 2004.**

Signed and sealed this 21st day of October 2004.

Lana Chikami, City Clerk

(SEAL)

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Ongoing Maintenance and Procedures

The City of Paramount Hazard Mitigation Steering Committee shall review and revised the plan every 12 months. The purpose is to:

- Document the process on implementation of hazard mitigation strategies
- Review and update changes as appropriate to the Plan.

The Plan will be re-submitted to the California Office of Emergency Services and FEMA every 5 years for review and approval.

Legal Authority

Federal Laws

Federal legislation has historically provided funding for disaster relief, recovery, and some hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) is the latest legislation to improve this planning process (Public Law 106-390). The new legislation reinforces the importance of mitigation planning and emphasizes planning for disasters before they occur. As such, DMA 2000 establishes a pre-disaster hazard mitigation program and new requirements for the national post-disaster Hazard Mitigation Grant Program (HMGP).

Section 322 of DMA 2000 specifically addresses mitigation planning at the state and local levels. It identifies new requirements that allow HMGP funds to be used for planning activities, and increases the amount of HMGP funds available to states that have developed a comprehensive, enhanced mitigation plan prior to a disaster. States and communities must have an approved mitigation plan in place prior to receiving post-disaster HMGP funds. Local and tribal mitigation plans must demonstrate that their proposed mitigation measures are based on a sound planning process that accounts for the risk to and the capabilities of the individual communities.

FEMA prepared an Interim Final Rule, published in the Federal Register on February 26, 2002 (44 CFR Parts 201 and 206), which establishes planning and funding criteria for states and local communities.

The Plan has been prepared to meet FEMA and COESS requirements thus making the County eligible for funding and technical assistance from state and federal hazard mitigation programs.

- Robert T. Stafford Act PL 93-288
- Federal Disaster Relief Act of 1974 (Public Law 93-288).
- Federal Civil Defense Act of 1950 (Public Law 920), as amended
- Public Law 84-99 (U.S. Army Corps of Engineer-Flood Fighting).

State Laws

California has many laws and programs relating to hazard mitigation, the most effective of which include:

- California Earthquake Hazards Reduction Act of 1986
- Caltrans' Seismic Retrofit Program
- California Fire Alliance
- California Earthquake Authority's Seismic Retrofit Program
- NFIP, administered by the DWR
- State planning law and OPR's general plan guidance documents
- CDI Residential Retrofit Program

The following are state laws and executive orders related to hazard mitigation:

- Executive Order W-18-19
- Executive Order W-9-91
- Health & Safety Code §19211
- Health & Safety Code §19181.
- Public Resources Code §2621, et seq. (the Alquist-Priolo Earthquake Fault Zoning Act)
- 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).

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

Local Codes & Ordinances

Emergency Services Ordinance No. 864, adopted 07/02/96 by the City Council.

Resolution No. 59:035 adopting the Master mutual Aid Agreement, adopted 4/21/59

Resolution No. 59:034 adopting Workmen's Compensation Benefits for Disaster Service Workers, adopted 4/21/97

Resolution No. 98:022 adopting the SEMS Multi-hazard Functional Plan (6/98)

Other 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

City of Paramount Identified Mitigation Constraints

Constraints

The City of Paramount, surrounded by a large industrial area, is not in a position to make its own decisions regarding major disaster plans, including regional evacuation, water supply, etc. The City contracts for city services and consequently, the staff available to assist in emergency response is relatively small.

Statement on Financial Impact of State Budget on City Staffing Levels and ability to Mitigate Hazardous Conditions

The loss of revenue from the State of California has directly impacted staffing within the City of Paramount. The City has implemented a hiring freeze and is offering early retirement packages for eligible employees. Reductions in staffing will directly impact the ability of the City to provide assistance to the residents and or to first responder public safety agencies in the event of a disaster or emergency.

City of Paramount General Plan Health & Safety Element

Economic Development

The following potential constraints may affect future industrial development and/or expansion in the City:

- Continued private residential uses on individual parcels in industrial areas limits industrial potential for the entire area.
- Few large, vacant sites exist that are suitable for major commercial/industrial development or industrial parks expansion.
- Some existing industries present problems of noise, heavy traffic, smoke, dust, and vibration in and around residential areas.
- The poor quality of some existing industrial development discourages good quality commercial or residential development.
- Industrial development encourages truck traffic, which is noisy and may interfere with residentially-based auto circulation.
- Some of the City's industries generate toxic by-products and handle hazardous materials.

City of Paramount General Plan April 2004

Background

The Disaster Preparedness Component of the General Plan deals primarily with response to disasters. Each city in California is required to maintain a disaster plan. The Sheriff's Department in Los Angeles has been given the authority for the development of disaster plans for the County and coordinates plans for each city. Three agencies are involved in carrying out the disaster plan for the City. These are the Sheriff, the County Fire Department and the City government. Each has established a plan of operations. Emergency communication facilities have been set up so that in case of emergency, each agency is aware of the activities of all other agencies.

Constraints & Opportunities

The City of Paramount, surrounded by a large industrial area, is not in a position to make its own decisions regarding major disaster plans, including regional evacuation, water supply, etc. Contracting for city services means the City's staff is available to assist in emergency response is relatively small.

Earthquake - the level of seismic activity and resulting risk to life and property in Southern California is high. Paramount contains a large majority of buildings constructed prior to establishment of contemporary earthquake regulations.

Fire - There is a large number of industries located in Paramount, especially the petroleum distributors, which create higher risks of a major urban fire. Many of Paramount's structures are quite old, therefore not incorporating contemporary fire standards. The residential neighborhoods are increasing in density, therefore increasing the probability of a major fire and consequences if one does occur. Reduced public revenues make the provision of public services even more difficult than in the past.

Law Enforcement - Since Paramount does not have its own City Police Department it must contract out for services. Using this "dedicated service" process, the City contracts out for man hours rather than for officers. Currently, Paramount receives 60,000 man hours per year of field law enforcement. The City has indicated that this is an adequate level of police service and that this level is relatively high compared to other cities in the area. However, there is currently no police or sheriff's station within the City limits. Some areas are deterioration and present the potential for high crime rates.

Industrial Pollution/Hazardous Waste Management- Industrial pollution is a major issue because of the large amount of heavy industry in the City and the extent of fabrication and processing which occurs. The City of Paramount has adopted the Los Angeles County Hazardous Waste Management Plan. The City chose not to adopt the County's Map. Permits to store hazardous waste will be approved on a site by city basis, based on the criteria outlined in the Hazardous Waste Management Plan. The Los Angeles County Fire Department maintains a list of all hazardous waste storage locations within the City. The Fire Department has the authority to inspect all sites on a regular basis, along with maintaining the capability to respond to any hazardous material accident.

Water/Wastewater Management. As a small portion of a large urbanized area, Paramount has little influence over area wide water and waste management policy decisions which may have important impact. Similarly, Paramount's flexibility is limited by dependence on regional priorities, facilities, and systems. The large number of private water companies makes coordination difficult. Small companies may not be able to provide adequate service.

Schools. - Population transience makes maintenance of quality education sequence for children difficult. Fiscal constraints on school facility acquisition, development and operation are extremely difficult. Most of the schools serving Paramount are at or above capacity. Limited funds are available for school facility maintenance. Enrollment increases at a rate of 300 to 400 new students per year is average.

Health Facility - Emergency access to Suburban Hospital is limited because Vermont Avenue is not a through street.

Section 2 – Planning Process

Table of Contents

Hazard Mitigation Planning Participation 2

Steering Committee Members 2

Adjunct Contributors 2

Hazard Mitigation Planning Steering Committee Functions 2

Hazard Mitigation Planning Committee By-laws 3

Hazard Mitigation Planning Tasks 3

Hazard Mitigation Planning Goals 5

Hazard Mitigation Planning Objectives 5

Steering Committee Meeting Minutes 7

Hazard Mitigation Planning Public Participation 25

Section 2 –Planning Process

Hazard Mitigation Planning Participation

Steering Committee Members

Steve Myrter, Director Utilities	smyrter@paramountcity.com
Chris Cash, Asst. Utilities Director	ccash@paramountcity.com
Gil Ferreira, Director Public Works	ferreira@paramountcity.com
Patti Cummings, Paramount USD	pcumming@paramount.k12.ca.us
John Carver, Planning Manager	jcarver@paramountcity.com
Terry Cahoon, Senior Accountant	tcahoon@paramountcity.com
Karina Lam, Assistant Finance Director	klam@paramountcity.com
John Moreno, Public Safety Director	jmoreno@paramountcity.com
Joe Perez, Community Development Director	jperez@paramountcity.com
Maria G. Meraz, Public Safety	mmeraz@paramountcity.com
Janeno Ottaiano, Public Safety	jottaiano@paramountcity.com
Jose Gomez, Finance	jgomez@paramountcity.com
Bill Pagett, Public Works	bpagett@Paramountcity.com
Jan Rogala, Consultant/ Dimensions Unlimited	janrogala@aol.com
Theresa Hayes, Consultant/Dimensions Unlimited	Theresa@dimensionsui.com
Kristel Arnott, Consultant/Dimensions Unlimited	kristel@dimensionsui.com
Sergio Ramirez, Community Development	sramirez@paramountcity.com

Adjunct Contributors

Kit Armstrong	Los Angeles County Sheriff's Department
George Verkamp	Los Angeles County Fire Department

Hazard Mitigation Planning Steering Committee Functions

In March of 2004, the City of Paramount formed the Hazard Mitigation Steering Committee, which was drawn from personnel from the City's Departments, representatives from Los Angeles County Departments, and Paramount Unified School District.

It was recognized when forming this committee that it would need to be active in the future for mitigation strategy identification and implementation.

In accordance with: (Local and State Laws), the City of Paramount is the lead agency and chair, responsible for coordinating the efforts of the City of Paramount in formulating and supporting the City of Paramount Hazard Mitigation Steering Committee, in formulating and supporting the City of Paramount Mitigation Strategy Identification, Plan promulgation and maintenance.

Hazard Mitigation Planning Committee By-laws

1. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee was organized in March 2004, as reflected by the minutes of that meeting, and agreed to meet monthly to identify hazard vulnerabilities, identify hazard priorities and review, identify and implement feasible hazard mitigation strategy recommendations.

2. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee agrees to make and pass policy recommendations by a vote of a simple majority of those members present at the scheduled meeting

3. Any single Hazard Mitigation Steering Committee member may request, at a scheduled meeting of the CITY OF PARAMOUNT Hazard Mitigation Steering Committee, an adoption of, or amendment to any part of the plan or process.

4. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee may form subcommittees to review and develop those feasible hazard mitigation strategy recommendations identified that will be reviewed by the Hazard Mitigation Steering Committee as a whole.

5. Sub-committees or members will identify and bring forward hazard mitigation strategies from existing recommendations contained in plans and documents, and from the input of intra-city departments, agencies, private citizens, and organizations.

6. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee will identify constraints to mitigation strategies that affect the CITY OF PARAMOUNT's ability, authority and responsibility to implement those strategies.

7. Public Input will be implemented in the following manner: Citizen Questionnaires and solicitation through local print media.

Hazard Mitigation Planning Tasks

1. Coordinate multi-hazard mitigation planning tasks and activities with the CITY OF PARAMOUNT administrative staff and departments to develop a multi-hazard disaster mitigation plan and support the chair's oversight of the planning process.

2. Assist in carrying out the goals and objectives of the CITY OF PARAMOUNT Hazard Mitigation Plan in compliance with FEMA DMA 2000 Hazard Mitigation Act.

3. Prioritize risks for implementing mitigation strategies.

4. Select designated Critical Facilities owned by CITY OF PARAMOUNT and in proximity to CITY OF PARAMOUNT facilities, and develop a risk exposure analysis for those facilities.

5. Select highest priority and most-desired mitigation recommendations and develop those recommendations for further action by each member of the CITY OF PARAMOUNT Hazard Mitigation Steering Committee.

6. Review mitigation planning drafts, recommendations and updates.

7. Develop and implement long- and short-term goals.

8. Integrate the plan with all phases of the City of Paramount's Emergency Management Plan, Safety Element to the General Plan and School District Safety Plan.

9. Provide for the recommendations of the Steering Committee decisions to the City Council and School District Governing Board.

10. Encourage development of, coordinate and implement a methodology for the implementation of public input.

11. Establish Hazard Mitigation Steering Committee responsibilities to include but not be limited to the following:

    a) Determine implementation ability and constraints for proposed Hazard Mitigation planning steps and development of strategies.

    b) Bring forward community concerns through private and public input.

    c) Identify implementation resources.

    d) Identify lead departments for implementation of strategies.

    e) Provide for the update of the Disaster Mitigation Plan on a regularly scheduled basis.

    f) Evaluate and carry out mitigation activities, as feasible.

    g) Assist in implementation of funding identification and procurement.

Hazard Mitigation Planning Goals

1. Support the priorities of the CITY OF PARAMOUNT; its mandate, employees, students, citizens and the business community.

2. Promote economic development consistent with seismic, floodplain and risk management guidance as developed by the CITY OF PARAMOUNT and its agencies, and/or organizations.

3. Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to the CITY OF PARAMOUNT.

4. Promote the recognition of the real value of hazard mitigation to public facilities, public safety and the welfare of all citizens of the CITY OF PARAMOUNT.

5. Support the mitigation efforts of private citizens, non-profit organizations, community-based organizations and private businesses throughout the city.

Hazard Mitigation Planning Objectives

1. Identify mitigation actions to reduce loss of lives and property.

2. Implement mitigation actions to reduce loss of lives and property, where feasible.

3. Identify mitigation strategies that will allow the CITY OF PARAMOUNT to perform its primary mission and goals.

4. Identify mitigation opportunities for short- and long-range planning considerations.

5. Maintain safe building and zoning codes that support scientific findings of a known risk.

6. Identify lead CITY OF PARAMOUNT Departments and Agencies that have an interest in mitigation of specific hazards.

7. Develop a standard mitigation program utilizing authorities, policies and programs of each CITY OF PARAMOUNT Department and/or Agency.

8. Organize, train and maintain an effective and ongoing CITY OF PARAMOUNT Hazard Mitigation Steering Committee that will facilitate implementation of the CITY OF PARAMOUNT Mitigation Plan.

9. Review and update other CITY OF PARAMOUNT programs to identify current and future mitigation goals and objectives in compliance with all city, county, state and Federal requirements.

10. Gain support of the CITY OF PARAMOUNT's administration for the CITY OF PARAMOUNT Multi-Hazard Mitigation Plan implementation.

11. Achieve the overall goal of developing a comprehensive mitigation program with Federal, state, county and city organizations and other appropriate jurisdictions.

12. Support and expand identified hazard mitigation strategies as set forth in the Safety Element to the CITY OF PARAMOUNT General Plan and all other CITY OF PARAMOUNT plans that contain Hazard Mitigation Strategies.

Steering Committee Meeting Minutes

City of Paramount Hazard Mitigation Steering Committee

16400 Colorado Ave
Paramount, CA 90723
Committee Meeting Minutes
March 23, 2004

Meeting Called to Order

First meeting of the City of Paramount Hazard Mitigation Steering Committee called to order at 2:08 P.M.

Introductions

Steering Committee Attendees:

Steve Myrter	Director Utilities	220-2157	smyrter@paramountcity.com
Chris Cash	Asst. Utilities Director	220-210	ccash@paramountcity.com
Gil Ferreira	Director Public Works	220-2100	ferreira@paramountcity.com
Patti Cummings	Paramount USD	220-2964	pcumming@paramount.k12.ca.us
John Carver	Planning Manager	220-2048	jcarver@paramountcity.com
Terry Cahoon	Senior Accountant	220-2213	tcahoon@paramountcity.com
Karina Lam	Assistant Finance Director	220-2210	klam@paramountcity.com
John Moreno	Public Safety Director	220-2001	jmoreno@paramountcity.com
Joe Perez	Community Development Director	220-2038	jperez@paramountcity.com
Jan Rogala	Dimensions	916-712-1687	janrogala@aol.com
Rich Rogala	Dimensions	707-374-6529	rich@dimensionsui.com
Theresa Hayes	Dimensions	916-804-3841	theresa@dimensionsui.com

DMA 2000 Overview

Jan Rogala (Consultant) gave a 55 minute overview of the Hazard Mitigation Planning Process.

Jan asked for information on known risks: Discussions was held on Earthquake, Flood, Hazardous Materials, transportation, and human-caused disasters. The committee was asked to consider a natural versus multi-hazard DMA 2000 Plan.

Jan advised the committee that the DMA 2000 Plan will need to be re-submitted every 5 years and recommended that the committee review it every year.

New Business

The group elected to call itself the City of Paramount Hazard Mitigation Steering Committee. Chris Cash was elected chair of the City of Paramount Steering Committee. The committee agreed to meet every second Tuesday at 1:30pm.

Jan distributed the Hazard Mitigation Task Work Table to give the committee an overview of the entire process. The committee was asked to periodically review the timeline to keep the process on track.

Jan asked the committee if the City had a mission statement. Since it does not, the committee will need to provide a mission statement for the plan. Jan will provide samples for the committee to review.

The Steering Committee By-Laws were proposed and adopted. They are:

1. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee was organized in March 2004, as reflected by the minutes of that meeting, and agreed to meet monthly to identify hazard vulnerabilities, identify hazard priorities and review, identify and implement feasible hazard mitigation strategy recommendations.

2. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee agrees to make and pass policy recommendations by a vote of a simple majority of those members present at the scheduled meeting.

3. Any single Hazard Mitigation Steering Committee member may request, at a scheduled meeting of the CITY OF PARAMOUNT Hazard Mitigation Steering Committee, an adoption of, or amendment to any part of the plan or process.

4. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee may form subcommittees to review and develop those feasible hazard mitigation strategy recommendations identified that will be reviewed by the Hazard Mitigation Steering Committee as a whole.

5. Sub-committees or members will identify and bring forward hazard mitigation strategies from existing recommendations contained in plans and documents, and from the input of city departments, agencies, private citizens and organizations.

6. The CITY OF PARAMOUNT Hazard Mitigation Steering Committee will identify constraints to mitigation strategies that affect the CITY OF PARAMOUNT and the Redevelopment Agency's ability, authority, economic capability, and responsibility to implement those strategies.

7. Public Input will be implemented in the following manner: *To be decided*

The Steering Committee Tasks were proposed and adopted. They are:

1. Coordinate multi-hazard mitigation planning tasks and activities with the CITY OF PARAMOUNT administrative staff and departments to develop a multi-hazards disaster mitigation plan and support the chair's oversight of the planning process.

2. Assist in carrying out the goals and objectives of the CITY OF PARAMOUNT Hazard Mitigation Plan in compliance with FEMA DMA 2000 Hazard Mitigation Act.

3. Prioritize risks for implementing mitigation strategies.

4. Select designated Critical Facilities owned by CITY OF PARAMOUNT and in proximity to CITY OF PARAMOUNT facilities, and develop a risk exposure analysis for those facilities.

5. Select highest priority and most-desired mitigation recommendations and develop those recommendations for further action by each member of the CITY OF PARAMOUNT Hazard Mitigation Steering Committee.

6. Review mitigation planning drafts, recommendations and updates.

7. Develop and implement long- and short-term goals.

8. Integrate the plan with all phases of the City of Paramount's Emergency Management Plan, Safety Element to the General Plan.

9. Provide for the recommendations of the Steering Committee decisions to the City Council.

10. Encourage development of, coordinate and implement a methodology for the implementation of public input.

11. Establish Hazard Mitigation Steering Committee responsibilities to include but not be limited to the following:

    - Determine implementation ability and constraints for proposed Hazard Mitigation planning steps and development of strategies
    - Bring forward community concerns through private and public input
    - Identify implementation resources
    - Identify lead departments for implementation of strategies
    - Provide for the update of the Disaster Mitigation Plan on a regularly scheduled basis
    - Evaluate and carry out mitigation activities, as feasible.
    - Assist in implementation of funding identification and procurement

    Steering Committee Goals were proposed and adopted. They are:

    - Support the priorities of the CITY OF PARAMOUNT; its mandate, employees, students, citizens and the business community.
    - Promote economic development consistent with seismic, floodplain and risk management guidance as developed by the CITY OF PARAMOUNT and its agencies, and/or organizations.
    - Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to the CITY OF PARAMOUNT.
    - Promote the recognition of the real value of hazard mitigation to public facilities, public safety and the welfare of all citizens of the CITY OF PARAMOUNT.

- Support the mitigation efforts of private citizens, non-profit organizations, community-based organizations and private businesses throughout the city.

Steering Committee Objectives were proposed and adopted. They are:

- Identify mitigation actions to reduce loss of lives and property.
- Implement mitigation actions to reduce loss of lives and property, where feasible.
- Identify mitigation strategies that will allow the CITY OF PARAMOUNT to perform its primary mission and goals.
- Identify mitigation opportunities for short- and long-range planning considerations.
- Maintain safe building and zoning codes that support scientific findings of a known risk.
- Identify lead CITY OF PARAMOUNT Departments and Agencies that have an interest in mitigation of specific hazards.
- Develop a standard mitigation program utilizing authorities, policies and programs of each CITY OF PARAMOUNT Department and/or Agency.
- Organize, train and maintain an effective and ongoing CITY OF PARAMOUNT Hazard Mitigation Steering Committee that will facilitate implementation of the CITY OF PARAMOUNT Mitigation Plan.
- Review and update other CITY OF PARAMOUNT programs to identify current and future mitigation goals and objectives in compliance with all city, county, state and Federal requirements.
- Gain support of the CITY OF PARAMOUNT's administration for the CITY OF PARAMOUNT Multi-Hazard Mitigation Plan implementation.
- Achieve the overall goal of developing a comprehensive mitigation program with Federal, state, county and city organizations and other appropriate jurisdictions.
- Support and expand identified hazard mitigation strategies as set forth in the Safety Element to the CITY OF PARAMOUNT General Plan and all other CITY OF PARAMOUNT plans that contain Hazard Mitigation Strategies.

Jan reiterated that these items can be revisited at any time and added too, edited or changed.
The steering committee has been tasked with making recommendations to the City Council.

Jan distributed the Hazard Risk Matrix and gave instructions on how to fill it out. It is to reflect the opinions of the stakeholders and the results will be compiled and compared with the scientific data and research that will be completed for the city Hazard Risk Analysis. Matrices are to be completed and turned into the chair who will forward them to the consultant for compiling.

Jan asked the committee how they would like to address public input. Some of the opportunities to involve the public could be in a questionnaire, public meetings, and/or on

the city's website. Public meetings would be done through existing community commissions such as Public Safety and Public Works. A general invitation for public participation will be issued using the local media.

A Mitigation Program and Project form draft was given to the committee to review. The draft is a guide for departments to fill out and submit to the committee of their past, current and future mitigation strategies.

Meeting adjourned at 3:30.

City of Paramount Hazard Mitigation Steering Committee

16400 Colorado Ave
Paramount, CA 90723

Committee Meeting Minutes

April 7, 2004

Meeting Called to Order

Second meeting of the City of Paramount Hazard Mitigation Steering Committee called to order at 1:35 P.M.

Introductions

Steering Committee Attendees:

Chris Cash	Utilities	220-2020	ccash@paramountcity.com
Gil Ferreira	Public Works	220-2100	gferreira@paramountcity.com
John Carver	Comm. Development	220-2048	jcarver@paramountcity.com
Steve Myrter	Utilities	220-2157	smyrter@paramountcity.com
Janeno Ottaiano	Public Safety	220-2002	jottaiano@paramountcity.com
Jose Gomez	Finance	220-2207	jgomez@paramountcity.com
Karina Lam	Finance	220-2210	klam@paramountcity.com
Bill Pagett	Public Works	220-2020	bpagett@paramountcity.com
Jan Rogala	Dimensions	916.712-1697	janrogala@aol.com
Theresa Hayes	Dimensions	626.286-8305	theresa@dimensionsui.com

Consideration of minutes: March 23, 2004 meeting minutes were review and adopted with one addition by the committee. A "g" was added before ferreria@paramountcity.com

Old Business

The committee reviewed and adopted the City of Paramount Hazard Mitigation Risk Matrix Results. The committee rated each disaster risk into High, Moderate or Low categories.

High	Moderate	Low
Earthquake	Transportation Failure	Special Events
Utility Loss	Drought	Substations
Floods	Winds	Dam failures
Transportation Accident/ Incident	Economic Loss	Sinkholes
Water/Waste Water Loss	Severe Weather	Wild land/Urban Interface Fire
WMD/Terrorism	Biological/human disease	Volcanic
Explosions	Data Telecommunication Loss	

Jan reiterated to the committee that the ratings can be changed at any time. Drought needs to be rated and added to the Hazard Mitigation Risk Matrix.

The committee discussed and commented on the following risks:

- Seismic earthquake masonry reinforcement
- Oil refineries
- Large Industrial traffic

The committee discussed and commented on the following risks (continued from page 1):

- West side of the City of Paramount can be cut off if the three main arterials and/or bridges are damaged.
- Power lines owned/operated by Southern California Edison Company
- Metropolitan Water District has a 78" pipeline through Paramount
- Los Angeles County Public Works has 66" and 90" sanitation pipes running parallel to the levy
- Liquefaction danger
- Hazardous Materials: Railroad tanker: deliveries, storage, oil, petroleum products
- SDNI Chrome Shop: chemical etching
- Air pollution: discharges near elementary schools
- Identify above ground pipes and drain systems. The Los Angeles County Public Works is the keeper of this information.

Jan advised the Steering Committee to write to the Southern California Edison Company, the Metropolitan Water District and the Los Angeles County Public Works Department for risk probability data, the age, condition, and type of pipelines, and utility loss historical data. To supply any and all information that supports past, present and future mitigation strategies pertaining to the City of Paramount.

The City of Paramount contracts with the Los Angeles Sheriff Department and the Los Angeles Fire Department for services. The Steering Committee will invite the local representatives to join the committee. Dimensions will obtain the Los Angeles Fire Departments LEPC Plan. The Los Angeles Fire Department inspects businesses for industrial hazardous materials. Every Fire Station keeps a MSDS sheet for every business in its district.

Historical Research, Documentation, and Assets

- Master Plan is 15 years old. John will provide a copy of the Master Plan and Safety Element.
- All 13 un reinforced structures were brought up to current UBC 97 version building codes.
- Water: In District 2 the diameter of the sanitation pipe determines who is responsible for maintenance between the Los Angeles County Public Works Department and the City of Paramount.
- Community Development: The City of Paramount is spending 4.4 millions dollar on a 5000 square foot building which will be used as a Preschool and Community Center. This building will not be used as an emergency shelter.
- Emergency Operational Plans-SEMS: A copy will be loaned to Dimensions.
- Facilities Asset Inventory list: Facility list should include but not be limited to the City's owned buildings, schools, health care facilities and private businesses which have a direct economic impact on the city. The Steering Committee needs to identify which facilities are critical to the City of Paramount.
- Aerial Topographical Maps: No GIS maps. Can supply base maps and hard copy street number maps.

- There maybe mitigation strategies in the Public Safety section of the City'sY2K Millennium Plan. A copulation of information concerning vendors and the National Pollution Elimination. Need clarification from Bill Pagett.

Meeting adjourned at 2:33 P.M.

City of Paramount Hazard Mitigation Steering Committee

16400 Colorado Ave
Paramount, CA 90723
Committee Meeting Minutes
May 11, 2004

Meeting Called to Order

Third meeting of the City of Paramount Hazard Mitigation Steering Committee called to order at 1:30 PM.

Introductions

Steering Committee Attendees:

Chris Cash	Utilities	220-2020	ccash@paramountcity.com
Janene Ottaiano	Public Safety	220-2002	jottaiano@paramountcity.com
Karina Lam	Finance	220-2210	klam@paramountcity.com
Gil Ferriera	Public Works	220-2100	gferriera@paramountcity.com
John Carver	Comm.Development	220-2048	jcarver@paramountcity.com
Jan Rogala	Dimensions	916.712-1697	janrogala@aol.com
Theresa Hayes	Dimensions	626.286-8305	theresa@dimensionsui.com

Consideration of minutes: April 7, 2004 meeting minutes were reviewed and adopted

Old Business

Review of data available from the City

Chris Cash provided the below documents to Dimensions:

- Maps
- List of Critical City Facilities
- Paramount General Plan and Housing Element Update Project Notebook
- Guidelines for Evaluation & Mitigating Seismic Hazards in California – Department of Conservation Division of Mines and Geology
- SEMS Multi Hazard Functional Plan December 1997

Karina Lam provided a copy of the CJPIA Property Schedule City of Paramount, Prepared by Driver Alliant Insurance Services.

The committee assessed the documents provided and determined:

- Critical Facilities list is complete – side note: 1.4 million dollar 5000 square foot building is not completed; it is still the contractors building until accepted by the City of Paramount.
- Asset list is incomplete
- Public Works documents; check on progress. They do not have a Strategic Plan.
- Capital Project – Capital Improvement Plan is 10 years old.

Review of Risk prioritization

The committee received another Risk Analysis Matrix. The results did not change the results of the risk analysis. Drought will be added as a Low Risk. The committee voted to remove Special Events, Sinkholes, Wildland/Urban Interface Fires, and Volcanic from the Hazard Risk Analysis.

Dam failure research will determine if it remains as a risk. Whittier Narrow Dam is located near Paramount.
The committee discussed how Civil Unrest/Disorder affects Paramount. Historical data supports that changes in demographic, social and religious factors, and economic instability can trigger riots which directly or indirectly affects cities. The City of Paramount has successfully addressed Civil Unrest. Civil Unrest/Disorder will be added as a low risk to the Hazard Risk Analysis.
Hazardous Materials needs to be review, but will be added as a low risk as well.
Will check on how the Tsunami inundation maps overlay on the city's boundaries for risk.
There was an article in the newspaper two years ago concerning Tsunami risks.
The Superfund Plume is being addressed by the affected cities. It is not an immediate risk to Paramount.

High	**Moderate**	**Low**
Earthquake	Transportation Failure	Substations
Utility Loss	Winds	Drought
Floods	Economic Loss	Dam Failure
Transportation Accident/Incident	Severe Weather	Civil Unrest/Disorder
Water/Waste Water Loss	Biological/Human Disease	Hazardous Materials
WMD/Terrorism	Data Telecommunications	

Public Input

The committee agreed to review and customize the two page questionnaire form. They discussed methods of distributing the questionnaires to the Paramount citizens. Chris Cash will advise Dimensions on the changes. Theresa will email the questionnaire and cover letter to Chris. The cover letter can be used for the citizens and a colleague letter for businesses, non-profit organizations, and the Army Corp of Engineers.

- Newspaper?
- Utilities bills; 1200-1500 bills mailed out bi-weekly= 7500 citizens
- Website; Post the questionnaire and notice of availability of questionnaire on public counters.
- Neighborhood Watch Program
-

New Business

Mitigation Strategies

The committee will examine menus and methodologies concerning mitigation strategies.

Implement mitigation strategies for:

- Soft mitigation
- Update building codes
- Concrete tilt up buildings
- Un-reinforced masonry buildings
- Earthquake projections
- Emergency Broadcast System specific to Paramount's responses.

Stakeholders

The committee will invite their stakeholders for hazard mitigation input. The stakeholders are:

- Los Angeles County Fire Department
- Los Angeles County Sheriff's Department – Lt. Tony Warren
- Los Angeles County Department of Health Services

The Los Angeles County Fire and Sheriff Department will be invited to the June meeting. The Department of Health Services will be asked to attend the July meeting. Janene will contact the Fire and Sheriff Department representatives.

Adjourned at 2:40 PM.

City of Paramount Hazard Mitigation Steering Committee

16400 Colorado Ave
Paramount, CA 90723
Committee Meeting Minutes
June 8, 2004

Meeting Called to Order

Fourth meeting of the City of Paramount Hazard Mitigation Steering Committee called to order at 1:30 P.M.

Introductions

Steering Committee Attendees:

Chris Cash	Utilities	220-2020	ccash@paramountcity.com
Gil Ferreira	Public Works	220-2100	ferreira@paramountcity.com
John Carver	Comm. Development	220-2048	jcarver@paramountcity.com
Maria G. Meraz	Public Safety	220-5130	mmeraz@paramountcity.com
Kit Armstrong	LASD LKD Station Emer. Ops		920-5130 klarmstrong@lasd.org
Bill Pagett	Public Works	220-2020	bpagett@paramountcity.com
Jose Gomez	Finance	220-2207	jgomez@paramountcity.com
Jan Rogala	Dimensions	707.374-6529	janrogala@aol.com
Theresa Hayes	Dimensions	626.286-8305	theresa@dimensionsui.com

Considerations of minutes: May 11, 2004 meeting minutes were reviewed and adopted

Old Business

No additions to the City's Asset List or Public Works at this time. Dimensions received the Master Plan of Drainage in the mail on June 14, 2004.

The committee reviewed the Risk Analysis and agreed to make no changes at this time. They decided not to add Tsunami.

Chris did not receive the Public Input Questionnaire by email. Theresa will resend the questionnaire and cover letters (they were resent on June 9, and Chris confirmed receiving the documents).
The City of Commerce is translating the questionnaire into Spanish and will share with the other cities. The Spanish version will be sent to Paramount when completed.

Jan will send a menu and methodology samples for developing mitigation strategies to Chris.

Methodology form for mitigation strategies is made up of four sections.

- Brief description of the project
- Who (agency) will lead/implement the strategy?
- Cost Analysis (can be an approximate cost benefit analysis)
- Time frame to complete the project

New Business

Stakeholders

Southern California Edison emailed their data and mitigation strategies to their client cities.

Kit Armstrong will represent the Los Angeles County Sheriff's department. He was asked to give his expertise for mitigating disaster risks pertaining to the City of Paramount. Kit agreed to review the high risk disasters and make recommendations. Kit can share the city's matrix grid for Paramount. It is not a confidential document.

Maria will invite the Los Angeles County Fire Department and Los Angeles County Department of Health Services to the next steering committee meeting.

Transportation risk:

SCAG, MTA & Caltrans are developing a disaster warning system along the I-5 & I-710 corridor. The message boards will notify the travelers of disasters and redirect traffic. The cameras attached to the message boards will be connected to the Los Angeles Sheriff's Department and the appropriate city. The Major Master Plan for traffic patterns will extend from San Barbara to San Diego. Jan White or Pat Smith in the Transportation Division of the Department of Los Angeles Public Works can provided information for this project.

Grid: County wide Arterial Route Plan for a mass evacuation plan. The County wide Arterial Route Plan has not been approved by the City of Paramount. The agreement is currently being written.

Flood Risk:

Rainfall: Mitigation strategy is a pending storm drain project. Currently the city's storm drains contact with the Los Angeles County Department of Public Works (LACO DPW) system. The differences in storm drain pipe sizes between the city's pipes and LACO DPW causes water to back up into the system and flood the streets of Paramount. The proposed storm drain Master Plan Program cost is estimated at 10 million dollars. The City of Paramount has a pumping system to assist them in water removal at this time. The manual pumping system pumps the overflow into the river. The citizens are concerned about the 1-3 year storms. The City will move forward with the project as money becomes available.

Hazardous Materials

Petroleum pipelines run through the city. There is a hotline to report broken pipelines.

Maps

Chris will provide the Substructure maps.

Documents

- Finance Recovery Plan

Capability Assessment

The State of California is requiring capability assessments be included in the plan. This means that the jurisdictions need to examine the local laws to ensure they are appropriate

for the risk posed. The jurisdictions will need to determine their capabilities, such as financial, staffing, and expertise to mitigate risks.

Meeting Adjourned at 2:15 p.m.

City of Paramount Hazard Mitigation Steering Committee

16400 Colorado Ave
Paramount, CA 90723
Committee Meeting Minutes
July 13, 2004

Meeting Called to Order

Fifth meeting of the City of Paramount Hazard Mitigation Steering Committee called to order at 1:37 P.M.

Introductions

Steering Committee Attendees:

Chris Cash	Utilities	220-2020	ccash@paramountcity.com
Gil Ferreira	Public Works	220-2100	ferreira@paramountcity.com
Karina Lam	Finanace	220-2210	klam@paramountcity.com
George Verkamp	LACO Fire	562.634-6559	gverkamp@lacofd.org
Gary Young	LACO Fire	562.634-6559	
Eddie Ortega	LACO Fire		
Gary S Baldersten	LACO Fire		
Mike Carrillo	Public Safety	220-2057	mcarrillo@paramountycity.com
Sergio Ramirez	Comm. Development	220-2060	sramirez@paramountcity.com
Bill Pagett	Public Works	220-2020	bpagett@paramountcity.com
Theresa Hayes	Dimensions	626.286-8305	theresa@dimensionsui.com

Considerations of minutes: June 8, 2004 meeting minutes were reviewed and adopted with two changes.

- Page 2, Flood Risk paragraph, **project to Master Plan Program**
- Delete - LACO DPW Hazardous Waste Water Report

Old Business

Public Input

The Spanish version questionnaire will be made available to citizens and businesses upon request. The English language questionnaire was posted last week on the City's website. It will be on the City's counter and at the Chamber of Commerce. All completed responses will be collected by the next meeting which is August 10, 2004.

Project Forms

Chris and Bill will work towards completing the Project Forms for mitigation strategies. The completed forms will be mailed to Dimensions or delivered at the next meeting.

Documents Received:

- Lakewood Station Disaster Route list
- Lakewood Sheriff's Station Supplemental Emergency Operations Plans

Maps

Substructure maps are to be reference only in the DMA 2000 Plan primarily for security. They are kept and maintained by the department of Public Works and can be viewed there.
Paramount citizens and building contractors needing to location utilities lines during construction or community development use a private company, Dig Alert, to identify the type and path of electrical, gas, water, and miscellaneous underground energy lines. DigAlert was created by the utility companies and legally supported by the State of California to identify, locate, and reduce the risk of interrupting utility service.

Capability Assessment

The committee discussed the City's ability to respond and operate during a catastrophic event. Staffing reductions within the City could impact their deployment efforts. The City is not currently replacing vacancy in staffing. The committee will research short and long term affects.

Contract services provided by Los Angeles County Sheriff's and Fire Department would not be affected. Staffing, equipment and fire trucks at Fire Station 29 are dedicated to the City of Paramount.

New Business

- The Los Angeles Fire Department primary contact is Captain George Verkamp. He will discuss mitigation strategies with his co-workers and make recommendation at the next meeting. They discussed flood and transportation issues with the committee.
- Los Angeles Sheriff's department will be re-invited to the next meeting. It was suggested that a local sheriff representative may have personal experiences in the City to make recommendations to the committee.
- Utilities – no more data
- Health – no data

Community Development

The Community Development department will review and gather all pertinent information for the committee.

Meeting Location

All future meetings will be held at the City of Paramount Public Works Yard, 15300 Downey Avenue.

Meeting adjourned at 2:15 P.M.

City of Paramount Hazard Mitigation Steering Committee

16400 Colorado Ave
Paramount, CA 90723

Committee Meeting Minutes

August 10, 2004

Meeting Called to Order

Sixth meeting of the City of Paramount Hazard Mitigation Steering Committee called to order at 1:30 P.M.

Introductions

Steering Committee Attendees:

Christopher Cash	Utilities	ccash@paramountcity.com
John Carver	Planning	jcarver@paramountcity.com
Steve Myrter	Utilities	smyrter@paramountycity.com
Gil Ferreira	Public Works	gferreira@paramountcity.com
David Parker	LACO Sheriff	dnparker@lasd.org
Maria G. Meraz	Public Safety	mmeraz@paramountcity.com
Kristel Arnott	Dimensions	kristel@dimensionsui.com
Theresa Hayes	Dimensions	Theresa@dimensionsui.com
Jan Rogala	Dimensions	janrogala@aol.com

Considerations of minutes: July 14, 2004 meeting minutes were reviewed and adopted.

Old Business

Mitigation Strategies

- Construction/Development of a third water well to supplement their existing water supply. This would ensure further water reliability for fire protection. Funding would be needed by a State/Federal Grant. Estimated cost would be $2 million. Future Project
- Study to replace old water mainlines. Reliability to supply water for fire protection. Cost: 100K. Future Project
- Determine if existing inter-ties are sufficient to ensure that water systems can function during disasters. Cost: $ 5 million. Funding: Grant
- Study for Water Distribution. Future Project
- Chlorine Upgrade – Current Project
- Electronic Communication Message Boards on Interstate 710
- Traffic signal coordination in the City of Downey – Support and recommend wireless – fiber optic methodology
- Study feasibility if establishing cooperative agreements with transportation agencies to improve response to transportation- related disasters. (Concerns Trains, MTA, Private Truck Carriers)
- Purchase additional barricades, traffic cones, and other traffic control devices
- Education and notification regarding hazardous materials stored at well sites, i.e. Chlorine and/or fluoride.
- Survey all hazardous material locations
- Identify funding opportunities, e.g. State and Federal grants, for implementation of mitigation activities
- Create and implement a GIS System. Cost: $ 200K, Funding: Grant

- Establish an ongoing City of Paramount Hazard Mitigation Steering Committee and work together with other affected agencies/jurisdictions.
- Develop a comprehensive public education program regarding hazards, emergency response, and public participation.
- Study feasibility of installing traffic signals at fire stations, or purchasing "Opticon" system, that will allow traffic signal control by fire vehicles.
- Current Project: Establish emergency purchase orders to allow for faster response to emergencies.
- Encourage citizens' groups to complete emergency response training.
- Study need for establishing a specialized field response team for utilization during disasters.
- Upgrade current telecommunication system to a multiply 900mz system. Cost: $1.2 million. Funding: Grant
- Los Angeles County Sheriff's Department supported the need for a Warning System. Recommended a study to determine what system would be the most efficient. Cost: $ 26K.
- Also, Traffic communication system to provide freeway gridlock
- Earthquake Preparedness and Awareness Programs
- Historic Mitigation Project: Battery backup system for traffic signals. Cost: $ 500K Funding: State Department of Energy Completed in 2001

The City of Paramount's building codes addresses seismic retro-fitting for new construction. The building codes have been in effect since the early 90's. The City identified 9 buildings which were reinforced or demolished. There is one outside warehouse in redevelopment. The City is addressing their lighting system, plus securing bookcases and warehouse racks.

Mobile homes are governed by the State. The City of Paramount's building codes are adopted from the International Commerce of Construction (ICC).

1998 California Building Code

Chapter 94
Repair of Welded Steel Moment Frame Buildings Located In Earthquake High-Damage Areas

Chapter 95
Earthquake Hazard Reduction for Existing concrete Tilt-up Buildings

Chapter 96
Potentially Earthquake Hazardous Buildings

Chapter 98
Unoccupied Buildings and Structures

Chapter 99
Building and Property Rehabilitation

Public Input

No responses yet, the questionnaire are available through:

- City of Paramount Website
- Public & City Facilities
- Chamber of Commerce
- Public Works Commission meeting

Jurisdictional/Stakeholder Invitation

Dimensions will send a sample letter to Chris. A letter will be sent out to bordering jurisdictions and the City of Paramount's stakeholders asking for their hazard mitigation recommendations concerning their mutual hazards.

Capability Assessment

Statement on Financial Impact of State Budget on city Staffing Levels and ability to Mitigate Hazardous Conditions

The loss of revenue from the State of California has directly impacted staffing within the City of Paramount. The City has implemented a hiring freeze and is offering early retirement packages for eligible employees. Reductions in staffing will directly impact the ability of the City to provide assistance to the residents and or to first responder public safety agencies in the event of a disaster or emergency (document provided by the City of Paramount).

Adjourned at 2:40p.m.

Hazard Mitigation Planning Public Participation

Several documents (listed below) were used to solicit public and outside jurisdiction input pertaining to Disaster Hazard Mitigation and the development of this Plan.

August 16, 2004

(addressee)(Surrounding Cities and the County)

Attn: Emergency Services Coordinator

RE: Hazard Mitigation Plan

The City of Paramount is currently involved in writing a Disaster Hazard Mitigation Plan under the 2002 amendment to the Robert Stafford Act (PL 93-288) for reduction of damage from both natural and man caused risks that can affect our City. Paramount shares common borders with your jurisdiction and our jurisdiction may share some mutual corresponding risks, such as earthquake, flood, dam failure, wildland/urban interface fire, and other disaster hazards.

We are inviting your comments and input into the Paramount Hazard Mitigation Plan. The Hazard Mitigation Steering Committee would/will consider projects that you may want the City to participate in for the reduction of risks between our two cities.

The committee meets the 2nd Wednesday of each month in the Public Works Yard located of 15300 Downey Avenue at 1:30p.m. You are welcome to be our guest at a regular meeting or you may contact me directly at (562) 220- 2020.

Your concerns and Hazard Mitigation Strategy input would be both helpful and welcome. Thank you for your consideration.

City of Paramount
Chris Cash signature
Christopher S. Cash, Assistant Director
Public Works Department

This Jurisdictional/Stakeholder invitation letter was mailed to the following jurisdictions:

- City of Bellflower , 16600 Civic Center Drive, Bellflower, CA 90706
- City of Compton, 205 South Willowbrook Avenue, Compton, CA 90220
- City of Downey, 11111 Brookshire Avenue, Downey, CA 90241
- City of Long Beach, Civic Center Plaza, 333 West Ocean Blvd. Long Beach, CA 90802

Dear Resident:

_____ is/are currently developing an All-Hazard Mitigation Plan as required in the Disaster Mitigation Act of 2000 (DMA-2000). This project addresses:

Safety of Life & Property by:

Implementing activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from all hazards.

Reducing losses and repetitive damages for chronic hazard events.

Public Awareness by:

Developing and implementing education and outreach programs to increase public awareness of the risks associated with these hazards.

Providing information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities.

Natural Systems

Balancing natural resource management, and land use planning with natural hazard mitigation to protect life, property, and the environment.

Preserving, rehabilitating, and enhancing natural systems to serve natural hazard mitigation functions.

Foster Partnerships and Implementation by:

Strengthening communication and coordinate participation among and within public agencies, citizens, non-profit organizations, business, and industry to gain a vested interest in implementation.

Encouraging leadership within public and private sector organizations to prioritize and implement local and regional hazard mitigation activities.

Enhancing Emergency Services by:

Establishing policy to ensure mitigation projects for critical facilities, services, and infrastructure.

Strengthening emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.

Coordinating and integrating hazard mitigation activities, where appropriate, with emergency operations plans and procedures.

In accordance with that law, it is our intent to solicit input regarding hazards from the communities we serve. We have enclosed a short questionnaire designed to gather information vital to an effective Hazard Mitigation Planning Project. Please take a few minutes to fill out the questionnaire and return it, no later than _____ to:

Please place contact information here

Thank you for supporting our commitment to making _____ a safer place to live.

Sincerely,

Hazards Mitigation and Preparedness Questionnaire

This questionnaire is designed to help the Local Hazard Mitigation Planning Project by identifying the community's concerns about natural and human-caused hazards and to better understand community needs in reducing risk and loss from such hazards. The questionnaire should be completed by an adult, preferably the homeowner or the head of the household. Please, take a few moments to complete this questionnaire. All individual responses are strictly confidential, and are for research purposes only. Thank you.

1. Zip code: _____ Community Name or location: _____ Internet Access? Y/N _____ Own/Rent _____

2. How concerned are you about the following disasters affecting your community? Please give each hazard a priority rating as follows: ***0 = Not concerned;*** 1 ***= Somewhat concerned; 2 = Moderately concerned; 3 = Very concerned***

Natural:

Floods	_____	Landslide/Mudslide	_____	Fire	____
Levee Failure	_____	Earthquake	_____	Telecommunications Failure	____
High Winds	_____	Biological/Plant/Animal	_____	Radiological Incident	____
Dam Failure	_____			Special Events	____
Health Alert/Epidemic	_____	**Human caused:**		Terrorism	
		Transportation Loss	_____	Utilities Interruption	_____

3. What is the most effective way for you to receive information about how to make your household and home safer from natural disasters? (***Please check all that apply***.)

Media:

- ☐ Newspaper
- ☐ Newspaper ads
- ☐ Television news
- ☐ Television ads
- ☐ Radio news
- ☐ Radio ads

Other methods:

- ☐ Schools
- ☐ Outdoor advertising (billboards, etc)
- ☐ Books
- ☐ Mail
- ☐ Fire Department
- ☐ Internet
- ☐ Fact sheet/brochure
- ☐ Church/religious organization
- ☐ Employer
- ☐ Public meetings
- ☐ University or research institution
- ☐ Utility Bills

4 In the following list, please check those activities that you ***have done***, ***plan to do*** in the near future, ***have not done***, or are ***unable to do***. (***Please check one answer for each preparedness activity***)

Have you or someone in your household:	**Have done**	**Plan to do**	**Not done**	**Unable to do**
Attended meetings or received written information on natural disasters or emergency preparedness?				
Talked with family members about what to do in case of a disaster or emergency?				
Developed a "Household/Family Emergency Plan" in order to decide what everyone would do in the event of a disaster?				
Prepared a "Disaster Supply Kit" (extra food, water, medications, batteries, first aid items and other emergency supplies)?				
In the last year, has anyone in your household been trained in First Aid or Cardio-Pulmonary Resuscitation (CPR)?				

5. Building a disaster supply kit, receiving First Aid training and developing a household/family emergency plan are all inexpensive activities that require a personal time commitment. How much time (per year) are you willing to spend on disaster/emergency preparedness? (***Check only one***)

☐ 0-1 hour ☐ 2-3 hours ☐ 4-7 hours 8-15 hours ☐16+ hours ☐ Other, please specify

6. Did you consider the possible occurrence of a natural hazard when you bought/moved into your current home?

☐ Yes ☐ No

7. Would you be willing to spend more money on a home that has features that make it more disaster resistant?

☐Yes ☐ No ☐ Don't know

8. Do you carry flood insurance? If so what is the annual cost?

☐Yes ☐ No _____

9. Would you be willing to make your home more resistant to natural disasters?

☐ Yes ☐ No

10. What nonstructural or structural modifications for earthquakes and floods have you made to your home? (***Please check all that apply***)

10a. Nonstructural

☐ Anchor bookcases, cabinets to wall
☐ Secure water heater to wall
☐ Install latches on drawers/cabinets
☐ Fit gas appliances with flexible connections and concrete walls and
☐ Others (please explain)
☐ Others (please explain)
☐ None

10b. Structural

☐ Secure home to foundation
☐ Brace inside of cripple wall with sheathing
☐ Brace unreinforced chimney
☐ Brace unreinforced masonry and concrete walls and foundations

11. Natural and human-caused disasters can have a significant impact on a community but planning for these events can help lessen the impact. The following statement will help us determine community priorities for planning for those hazards. Please tell us how important each one is to you.

Statement	Very Important	Somewhat Important	Neutral	Not Very Important	Not Important
Protecting private property					
Protecting critical facilities (hospitals, transportation networks, fire stations)					
Preventing development in hazard areas					
Protecting natural environment					
Protecting historical and cultural landmarks					
Promoting cooperation among public agencies, citizens, non-profit organizations and businesses					
Protecting and reducing damage to utilities					
Strengthening emergency services (police, fire, ambulance)					

12. Please check the box that best represents your opinion of the following strategies to reduce the risk and loss associated with natural disasters.

Communitywide Strategies	Agree	Neutral	Disagree	Not Sure
I support a regulatory approach to reducing risk.				
I support a non-regulatory approach to reducing risk.				
I support policies to prohibit development in areas subject to natural hazards.				
I support the use of local tax dollars to reduce risks and losses from natural disasters.				
I support protecting historical and cultural structures.				
I would be willing to make my home more disaster-resistant.				
I support steps to safeguard the local economy following a disaster event				
I support improving the disaster preparedness of schools.				

Mail to: _____

The Spanish version questionnaire will be made available to citizens and businesses upon request. The English language questionnaire will be available on Paramount's website, City counters, and the Chamber of Commerce.

Section 3 – Demographics & Statistics

Table of Contents

History **3**
General Data **3**
Area 3
Population 3
Ethnicity 3
Education 5
Religion 5
Housing 7
Income 7
Structure of Government **10**
Administrative Body 10
Elected Officials 10
Contracted Services 10
Police Services 10
Fire Protection Services 10
Continuity of Government 12
Purpose 12
Responsibilities 12
Preservation of Local Government 12
Lines of Succession for Officials Charged With Discharging Emergency Responsibilities 12
Temporary City Seat 14
Emergency Operations Center (EOC) 14
Preservation of Vital Records 15
Departments & Responsibilities 16
Fire Protection 16
Police Service 18
General Facilities **19**
Military Bases 19
Federal 19
State 19
County 19
Inventory of Assets **20**
Critical Facilities 22
Critical Service Providers 24
Los Angeles County Fire Department Designated High Risk Facilities/Hazardous Materials 25
Station 57 25
Stration 31 27
Community/Economic Development 29
Land Use 29
Land Use Policies 30
Industrial Development 31
Open Spaces 31
Urban Design 31
Area Plan Land Use Policies 31
Commercial 32
Industrial 32
Business Park 32

Water/Waste Water/Sewer 32
Solid Waste Facilities 33
Storm Drainage 34
Sewerage System 34
Schools 35
Opportunities 36
Goals and Objectives 36
Policies 36
Public High Schools in Paramount: 36
Biggest Public Primary/Middle Schools In Paramount: 36
Private Primary/Middle School in Paramount: 37
Utilities 37
Health Care 38
Hospitals 38
Opportunities 38
Goals and Objectives 38
Policies and Programs 38
Higher Education 38
Technical Institutes/Colleges 38
Business & Industry 39
Manufacturing 39
Retail 40
Recreation 41
Transportation 41
Freeways 41
Major Highways 41
Railways 42
Mass Transit 42
Map of Truck Routes & Railroads 43
Non-profit & Community-based Organizations 44
Non-profit 44
Community-based Organizations 44
Climate 45
Local Meteorology 45
Average weather in Paramount, California 45
Severe Weather 45
Threatened & Endangered Species 46

Section 3 – Demographics & Statistics

History

Before Paramount became a city in 1957, the area was made up of two small communities called Hynes and Clearwater. The towns were home to a number of dairies, which in their heyday had 25,000 cows. By the early 1930's, in fact, Hynes boasted the largest hay market in the world; handling 135,837 tons in 1932 (Kansas City was second that year, with 111,943 tons). Each morning under the "Hay tree" (still to be found at Paramount Blvd. near Harrison St.), the day's price of hay was set, and then quoted around the world.

As land uses in Los Angeles County changed, and the dairies left for other areas, Paramount met the challenges of an evolving urban city. For its efforts, Paramount was named an "All-America City" by the National Civic League in 1988, and many of its innovative programs have attracted state and national recognition.

The cities of *Hynes* and *Clearwater* merged in 1948, and the new name *Paramount* was proposed because Paramount Boulevard, named for the Paramount Motion Picture Company, was the former boundary between the two communities.

General Data

Area

The City of Paramount covers 4.73 square miles (12.2 square kilometers)

Population

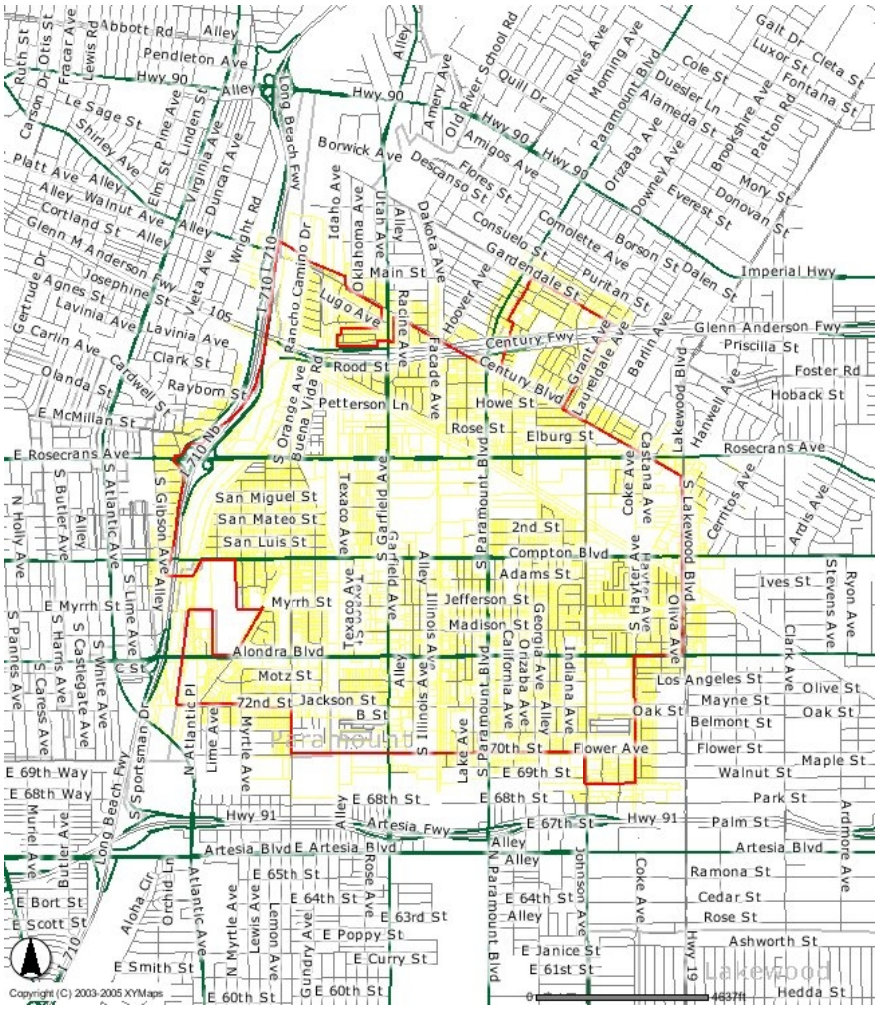
Paramount has a population of 55,266

Ethnicity

The ethnic makeup of Paramount is as follows:

- Hispanic (73%)
- African-American (13%)
- Caucasian (9%)
- Asian-American (3%)
- Other (2%.)

City of Paramount Boundary Map



Education

Public high school in Paramount:

- **PARAMOUNT HIGH** (Students: 3,864; Location: 14429 S. DOWNEY AVE.; Grades: 09 - 12)

Biggest public primary/middle schools in Paramount:

- **GAINES (WESLEY) ELEMENTARY** (Students: 1,145; Location: 7340 E. JACKSON; Grades: KG - 08)
- **ORANGE AVENUE (ELEM)** (Students: 1,138; Location: 15733 S. ORANGE AVE.; Grades: KG - 08)
- **ROOSEVELT ELEMENTARY** (Students: 1,074; Location: 13451 MERKEL AVE.; Grades: KG - 08)
- **LOS CERRITOS ELEMENTARY** (Students: 966; Location: 14626 GUNDRY AVE.; Grades: KG - 08)
- **ALONDRA (ELEM)** (Students: 956; Location: 16200 S. DOWNEY AVE.; Grades: KG - 08)
- **WIRTZ (HARRY) ELEMENTARY** (Students: 935; Location: 8535 CONTRERAS ST.; Grades: KG - 08)
- **PARAMOUNT PARK (ELEM)** (Students: 891; Location: 15110 SOUTH CALIFORNIA AVE.; Grades: KG - 08)
- **KEPPEL (MARK) ELEMENTARY** (Students: 824; Location: 6630 E. MARK KEPPEL ST.; Grades: KG - 08)
- **MOKLER (MAJOR LYNN) ELEMENTARY** (Students: 792; Location: 8571 E. FLOWER ST.; Grades: KG - 08)
- **JEFFERSON STREET** (Students: 749; Location: 8600 JEFFERSON ST; Grades: KG - 08)

Private primary/middle school in Paramount:

- **OUR LADY OF THE ROSARY** (Students: 314; Location: 14813 PARAMOUNT BLVD; Grades: KG - 8)

Religion

CERRITOS CATHOLIC KOREAN CTR
15946 DOWNEY AVE
PARAMOUNT, CA
(562) 630-6168

CHURCH OF CHRIST
8045 HARRISON ST
PARAMOUNT, CA
(562) 531-8088

CHURCH OF GOD OF PROPHECY
14743 GARFIELD AVE
PARAMOUNT, CA
(562) 634-7435

CLEARWATER CHRISTIAN CTR
16215 ORIZABA AVE
PARAMOUNT, CA
(562) 633-2828

DOWNEY AVE FOURSQUARE CHURCH
13376 DOWNEY AVE
PARAMOUNT, CA
(562) 633-4676

EMMANUEL REFORMED CHURCH
15941 VIRGINIA AVE
PARAMOUNT, CA
(562) 531-6820

GRACE CHURCH OF PARAMOUNT
6701 ALONDRA BLVD
PARAMOUNT, CA
(562) 634-6615

HOLY CHAPEL INC
8024 SOMERSET BLVD
PARAMOUNT, CA
(562) 531-6916

IGELSIA DE HERMANOS VIVOS
6823 SOMERSET BLVD
PARAMOUNT, CA
(562) 634-2417

JOYFUL COMMUNITY CHURCH
13900 PARAMOUNT BLVD
PARAMOUNT, CA
(562) 634-5977

NEW MARANATHA CHAPEL
8721 PASEO ST
PARAMOUNT, CA
(562) 602-2660

OUR LADY OF THE ROSARY CONVENT
14819 PARAMOUNT BLVD # P
PARAMOUNT, CA
(562) 633-6396

PARAMOUNT BAPTIST CHURCH
15548 PARAMOUNT BLVD
PARAMOUNT, CA
(562) 633-6746

PARAMOUNT UNITED METHODIST CHR
16635 PARAMOUNT BLVD
PARAMOUNT, CA
(562) 633-5229

PRAISE CHAPEL CHRISTIAN FELLOW
1475 WOODROOF AVE
PARAMOUNT, CA
(562) 633-2122

PRIMERA IGLESIA BAUTISTA DE
8632 ROSECRANS AVE
PARAMOUNT, CA
(562) 633-2723

TEMPLO DE JERSALEN IGLESIA
7440 CORTLAND AVE
PARAMOUNT, CA
(562) 633-0736

TORAHLINE
PARAMOUNT, CA
(562) 220-2770

Housing

Paramount has 14,006 housing units of which 42.8 percent are owner occupied. The median value of a housing unit is $154,300.

Income

DP-3. **Profile of Selected Economic Characteristics: 2000**
Data Set: Census 2000 Summary File 3 (SF 3) - Sample Data
Geographic Area: **Paramount city, California**

NOTE: Data based on a sample except in P3, P4, H3, and H4. For information on confidentiality protection, sampling error, nonsampling error, and definitions see http://factfinder.census.gov/home/en/datanotes/expsf3.htm.

Subject	Number	Percent
EMPLOYMENT STATUS		
Population 16 years and over	**36,631**	**100.0**
In labor force	21,312	58.2
Civilian labor force	21,305	58.2
Employed	18,858	51.5
Unemployed	2,447	6.7
Percent of civilian labor force	11.5	(X)
Armed Forces	7	0.0
Not in labor force	15,319	41.8
Females 16 years and over	**18,907**	**100.0**
In labor force	9,415	49.8
Civilian labor force	9,415	49.8
Employed	8,189	43.3
Own children under 6 years	**6,893**	**100.0**
All parents in family in labor force	3,335	48.4

Subject	Number	Percent
COMMUTING TO WORK		
Workers 16 years and over	**18,289**	**100.0**
Car, truck, or van -- drove alone	11,918	65.2
Car, truck, or van -- carpooled	4,423	24.2
Public transportation (including taxicab)	686	3.8
Walked	525	2.9
Other means	437	2.4
Worked at home	300	1.6
Mean travel time to work (minutes)	27.1	(X)
Employed civilian population 16 years and over	**18,858**	**100.0**
OCCUPATION		
Management, professional, and related occupations	3,399	18.0
Service occupations	2,958	15.7
Sales and office occupations	4,950	26.2
Farming, fishing, and forestry occupations	34	0.2
Construction, extraction, and maintenance occupations	1,988	10.5
Production, transportation, and material moving occupations	5,529	29.3
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	58	0.3
Construction	1,338	7.1
Manufacturing	4,609	24.4
Wholesale trade	1,028	5.5
Retail trade	2,109	11.2
Transportation and warehousing, and utilities	1,372	7.3
Information	422	2.2
Finance, insurance, real estate, and rental and leasing	924	4.9
Professional, scientific, management, administrative, and waste management services	1,382	7.3
Educational, health and social services	2,863	15.2
Arts, entertainment, recreation, accommodation and food services	1,418	7.5
Other services (except public administration)	950	5.0
Public administration	385	2.0
CLASS OF WORKER		
Private wage and salary workers	15,678	83.1
Government workers	2,036	10.8
Self-employed workers in own not incorporated business	1,102	5.8
Unpaid family workers	42	0.2
INCOME IN 1999		
Households	**13,963**	**100.0**
Less than $10,000	1,386	9.9
$10,000 to $14,999	947	6.8
$15,000 to $24,999	2,182	15.6
$25,000 to $34,999	2,072	14.8
$35,000 to $49,999	2,671	19.1
$50,000 to $74,999	2,816	20.2
$75,000 to $99,999	1,169	8.4
$100,000 to $149,999	497	3.6
$150,000 to $199,999	92	0.7
$200,000 or more	131	0.9
Median household income (dollars)	36,749	(X)
With earnings	12,234	87.6
Mean earnings (dollars)	45,519	(X)
With Social Security income	2,246	16.1
Mean Social Security income (dollars)	8,829	(X)

Subject	Number	Percent
With Supplemental Security Income	849	6.1
Mean Supplemental Security Income (dollars)	7,205	(X)
With public assistance income	1,299	9.3
Mean public assistance income (dollars)	5,288	(X)
With retirement income	1,443	10.3
Mean retirement income (dollars)	10,225	(X)
Families	**11,359**	**100.0**
Less than $10,000	966	8.5
$10,000 to $14,999	616	5.4
$15,000 to $24,999	1,924	16.9
$25,000 to $34,999	1,711	15.1
$35,000 to $49,999	2,219	19.5
$50,000 to $74,999	2,382	21.0
$75,000 to $99,999	935	8.2
$100,000 to $149,999	425	3.7
$150,000 to $199,999	50	0.4
$200,000 or more	131	1.2
Median family income (dollars)	37,276	(X)
Per capita income (dollars)	11,487	(X)
Median earnings (dollars):		
Male full-time, year-round workers	27,730	(X)
Female full-time, year-round workers	22,472	(X)
POVERTY STATUS IN 1999 (below poverty level)		
Families	**2,164**	**(X)**
Percent below poverty level	(X)	19.1
With related children under 18 years	2,039	(X)
Percent below poverty level	(X)	23.0
With related children under 5 years	1,199	(X)
Percent below poverty level	(X)	25.9
Families with female householder, no husband present	**906**	**(X)**
Percent below poverty level	(X)	31.5
With related children under 18 years	894	(X)
Percent below poverty level	(X)	40.4
With related children under 5 years	479	(X)
Percent below poverty level	(X)	46.5
Individuals	**12,011**	**(X)**
Percent below poverty level	(X)	21.9
18 years and over	6,423	(X)
Percent below poverty level	(X)	18.6
65 years and over	282	(X)
Percent below poverty level	(X)	10.5
Related children under 18 years	5,535	(X)
Percent below poverty level	(X)	27.5
Related children 5 to 17 years	3,898	(X)
Percent below poverty level	(X)	27.4
Unrelated individuals 15 years and over	1,792	(X)
Percent below poverty level	(X)	33.2

(X) Not applicable.
Detailed Occupation Code List (PDF 42KB)
Detailed Industry Code List (PDF 44KB)
User note on employment status data (PDF 63KB)
Source: U.S. Census Bureau, Census 2000 Summary File 3, Matrices P30, P32, P33, P43, P46, P49, P50, P51, P52, P53, P58, P62, P63, P64, P65, P67, P71, P72, P73, P74, P76, P77, P82, P87, P90, PCT47, PCT52, and PCT53

Structure of Government

Administrative Body

The City of Paramount, a General Law City, incorporated in 1957. The governing body for the City of Paramount consists of 5 Council Members, elected at large. Each year, the Council Members elect one member to serve as mayor, and another member to serve as vice-mayor. Each member of the Council serves a 4-year term of office.

To assist the Council in reviewing matters of importance, the Council appoints members to one of the four Commissions. Currently, there are 4 Commissions comprised of 5 members.

Elected Officials

Manuel E. Guillen, Mayor

Diane J. Martinez, Vice Mayor

Gene Daniels, Council Member

Daryl Hofmeyer, Council Member

Peggy Lemmons, Council Member

Contracted Services

Police Services

The City of Paramount contracts for law enforcement from the County of Los Angeles Sheriffs Department. There are 42 Sheriff's personnel assigned to Paramount, including patrol deputies, a detective team, and a deputy district attorney. There are 28 members of the City's Public Safety Department, which includes code enforcement officers.

Primary	**Alternate**
Paramount Station 15001 Paramount Blvd. Ste. C Paramount, CA 90723 (562)220-2002	***Lakewood Station*** 5130 Clark Station Lakewood, CA 90712 (562)866-9061

Fire Protection Services

The City of Paramount contracts with the Los Angeles County Fire Department for Fire Protection Services, including fire, rescue and hazardous materials. The County Fire Station 31, under Battalion # 9, which serves the City of Paramount, is located at 7521 Somerset Boulevard. Fire Station 31 also has paramedic services available for the area. The northern portion of the City is serviced by Fire Station 57 located at 5720 Gardendale Street, South Gate.

The main public safety issue is the potential for an urban fire. This potential is heightened due to the presence of several large petroleum distributors within the City as well as older industrial plants carrying on potentially fire-prone activities.

Goals and Objectives

1. Protect life and property from fire damage.

2. Reduce adverse economic, environmental, and social impacts of fires.

3. Provide fire protection services at the lowest cost commensurate with adequate protection.

The City of Paramount contracts with the Los Angeles County Chief Medical Examiner-Corner to coordinate resources for collection, identification and disposition of decease persons and human tissue. Select qualified personnel to staff temporary morgue sites. Identify mass burial sites. Establish and maintain records of fatalities.

Due to the lack of resources of the City of Paramount in Medical/Health Services, the City must rely on the Los Angeles County Department of Health Services. In the event of a major disaster, there may be an extended period of time before the County service can be provided. As resources allow, the Medical/Health Branch will coordinate the appropriate actions until the County responds.

General Duties:

- Monitor and coordinate all tactical operations of triage, emergency medical care and treatment of the sick and injured resulting from the incident.

- Assess medical casualties and needs.

- Coordinate resources and communication with medical/health care facilities and transportation companies for the evacuation and continual patient care consistent with the EOC Action Plan.

Continuity of Government

Purpose

A major disaster or an enemy attack could result in great loss of life and property, including the death or injury of key government officials. At the same time, there could be partial or complete destruction of established seats of government, and the destruction of public and private records essential to continued operations of government and industry.

In the aftermath of a major disaster, law and order must be preserved and essential government services must be maintained. This is best accomplished by civil government. To this end, it is particularly essential that local units of government continue to function.

Applicable portions of the California Government Code and the State Constitution (cited in the next paragraphs) provide authority for the continuity and preservation of state and local government.

Responsibilities

Government at all levels is responsible for providing continuous, effective leadership and authority under all aspects of emergency services operations (preparedness, response, recovery, and mitigation). Under California's concept of mutual aid, local officials remain in control of their jurisdiction's emergency operations while additional resources may be provided by others upon request. A key aspect of this control is to be able to communicate official requests, situation reports, and emergency information throughout any disaster a community might face.

Preservation of Local Government

Article 15 of the California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code) provides the authority, as well as the procedures to be employed, to ensure continued functioning of political subdivisions within the State of California. Generally, Article 15 permits the appointment of up to three standby officers for each member of the governing body, and up to three standby officers for the chief executive, if not a member of the governing body. Article 15 provides for the succession of officers who head departments responsible for maintaining law and order, or in furnishing public services relating to health and safety.

Article 15 also outlines procedures to assure continued functioning of political subdivisions in the event the governing bodies, including standby officers, are unavailable to serve.

The Emergency Services Act provides for the preservation of city government in the event of a peacetime or national security emergency.

Lines of Succession for Officials Charged With Discharging Emergency Responsibilities

The first step in assuring continuity of government is to have personnel who are authorized and prepared to carry out emergency actions for government in the event of a natural, technological, or national security disaster.

Article 15, Section 8638 of the Emergency Services Act authorizes governing bodies to designate and appoint three standby officers for each member of the governing body and for the chief executive, if not a member of the governing body. Standby officers may be residents or officers of a political subdivision other than that to which they are appointed. Standby officers take the same oath as regular officers and are designated Number 1, 2, or 3 as the case may be.

1. A successor to the position of Director of Emergency Services is appointed by the City Council. The succession occurs:

2. Should the director be unavailable or unable to serve, the positions listed below, in order, shall act as the Director of Emergency Services.

3. Should these positions be unavailable or unable to serve, the individuals who hold permanent appointments to the following positions in the city will automatically serve as acting director in the order shown. The individual who serves as acting director shall have the authority and powers of the Director, and will serve until the Director is again able to serve, or until a successor has been appointed by the City Council.

    a. First Alternate: Assistant City Manager

    b. Second Alternate: Public Works Director

    c. Third Alternate: Public Safety Director

Notification of any successor changes shall be made through the established chain of command.

Article 15, Section 8637 of the Emergency Services Act authorizes political subdivisions to provide for the succession of officers (department heads) having duties related to law and order and/or health and safety. **(See Lines of Succession list for city departments at the end of this Section.**)

Article 15, Section 8644 of the Emergency Services Act establishes a method for reconstituting the governing body. It authorizes that, should all members, including all standbys be unavailable, temporary officers shall be appointed as follows:

1. By the chairman of the board of the county in which the political subdivision is located, or

2. By the chairman of the board of any other county within 150 miles (nearest and most populated down to farthest and least populated), or

3. By the mayor of any city within 150 miles (nearest and most populated down to farthest and least populated).

Article 15, Section 8642 of the Emergency Services Act authorizes local governing bodies to convene as soon as possible whenever a State of War Emergency, State of Emergency, or Local Emergency exists, and at a place not necessarily within the political subdivision.

Article 15, Section 8643 Emergency Services Act describes the duties of a governing body during emergencies as follows:

1. Ascertain the damage to the jurisdiction and its personnel and property.

2. Reconstitute itself and any subdivisions.

3. Perform functions in preserving law and order and furnishing local services.

Temporary City Seat

Section 23600 of the California Government Code provides among other things:

1. The City Council shall designate alternative city seats which may be located outside city boundaries.

2. Real property cannot be purchased for this purpose.

3. A resolution designating the alternate city seats must be filed with the Secretary of State.

4. Additional sites may be designated subsequent to the original site designations if circumstances warrant.

5. In the event the primary location is not usable because of emergency conditions, the temporary seat of city government will be as follows:

    a. 1st Alternate: Progress Plaza - Plaza Hall

    b. 2nd Alternate: Paramount Park Community Center

    c. 3rd Alternate: Paramount High School - West Auditorium

Emergency Operations Center (EOC)

The City's EOC is located at 15300 Downey Avenue. The alternate EOC is located at 15001 Paramount Boulevard.

Day-to-day operations are conducted from departments and agencies that are widely dispersed throughout the City. An EOC is a location from which centralized emergency management can be performed during a major emergency or disaster. This facilitates a coordinated response by the Director of Emergency Services, Emergency Management Staff and representatives from organizations who are assigned emergency management responsibilities. The level of EOC staffing will vary with the specific emergency situation.

An EOC provides a central location of authority and information, and allows for face-to-face coordination among personnel who must make emergency decisions. The following functions are performed in the City of Paramount's EOC:

- Managing and coordinating emergency operations.

- Receiving and disseminating warning information.

- Developing emergency policies and procedures.

- Collecting intelligence from, and disseminating information to, the various EOC representatives, and, as appropriate, to County and State agencies, military, and federal agencies.

- Preparing intelligence/information summaries, situation reports, operational reports, and other reports as required.

- Maintaining general and specific maps, information display boards, and other data pertaining to emergency operations.

- Continuing analysis and evaluation of all data pertaining to emergency operations.

- Controlling and coordinating, within established policy, the operational and logistical support of departmental resources committed to the emergency.

- Maintaining contact and coordination with support DOCs, other local government EOCs, and the Los Angeles County Operational Area.

- Providing emergency information and instructions to the public, making official releases to the news media and the scheduling of press conferences as necessary.

Preservation of Vital Records

In the City of Paramount, the following individuals are responsible for the preservation of vital records:

1. City Clerk

2. Executive Secretary

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

- Protect and preserve the rights and interests of individuals, governments, corporations and other entities. Examples include vital statistics, land and tax records, license registers, and articles of incorporation.

- Conduct emergency response and recovery operations. Records of this type include utility system maps, locations of emergency supplies and equipment, emergency operations plans and procedures, personnel rosters, etc.

- Reestablish normal governmental functions and protect the rights and interests of government. Constitutions and charters. statutes and ordinances, court records, official proceedings and financial records would be included here.

Vital records of the City of Paramount are routinely stored in a vault located in the City Hall. A second set of microfilmed records is kept at the City Yard.

Record depositories should be located well away from potential danger zones and/or housed in facilities designed to withstand blast, fire, water, and other destructive forces.

Such action will ensure that constitutions and charters, statutes and ordinances, court records, official proceedings, and financial records would be available following any disaster.

Each department within the city should identify, maintain and protect its own essential records.

REFERENCES

1. Judicial System, Article VI, Section 1, 4, 5, and 10, of the Constitution of California.

2. Local Government, Article XI, of the Constitution of California.

3. Preservation of Local Government, Article 15 of the California Emergency Services Act (Chapter 7 of Division 1 of Title 2 of the Government Code).

4. Temporary County Seats, Section 23600, Article 1 of Chapter 4 of Division 1 of Title 3 of the Government Code.

Departments & Responsibilities

Each City in California is required to maintain a disaster plan. The Sheriff's Department in Los Angeles County has been given the authority for the development of disaster plans for the County and coordinates plans for each city. Three agencies are involved in carrying out the disaster plan for the City. These are the Sheriff, the County Fire Department, and the City government. Each has established a plan of operations. Emergency communication facilities have been set up so that in case of emergency, each agency is aware of the activities of all other agencies.

Fire Protection

The City of Paramount is served by the Los Angeles County Consolidated Fire Protection District. The District provides fire protection services to 44 incorporated cities and all unincorporated areas of Los Angeles County.

The City of Paramount is served by two County Fire Stations. The northern portion of the City is serviced by Fire Station 57 located at 5720 Gardendale Street, in South Gate. The remaining portion of Paramount is serviced by Fire Station 31 located at 7521 East Somerset Boulevard, in Paramount. Fire Station 31 also provides paramedic services for the area.

Issue – Fire Protection

The City has maintained a contract with the Fire Department since incorporation. The Department currently operates one station on Somerset Boulevard in the City, and the fire protection rating overall is very good. The City, through the following policies, remains committed to the Fire Department's on-going prevention and inspection programs, and the continued maintenance of the high standards related to emergency response.

Health and Safety Policy 16. Protect life and property from fire damage.

Health and Safety Policy 17. Reduce adverse economic, environmental, and social impacts of fires.

Health and Safety Policy 18. Provide fire protection services at the lowest cost commensurate with adequate protection.

Health and Safety Policy 20. Continue code enforcement efforts to reduce fife hazards associated with older buildings.

Health and Safety Policy 21. Require contemporary fire protection for multi-story structures and high-hazard industrial facilities.

Health and Safety Policy 22. Require all new development and selected existing development to comply with established fire safety standards.

Health and Safety Policy 23. Require new development to install sprinkler systems and smoke detectors, as appropriate.

Health and Safety Policy 24. Encourage improved fire insurance programs.

Health and Safety Policy 25. Monitor, review and improve, as needed, the City's emergency response capabilities.

Police Service

Since Paramount does not have its own Police Department, it contracts out for services using a "dedicated service" process. The City contracts out for man-hours instead of officers, and receives 60,000 man-hours per year of field law enforcement. The City has indicated that this is an adequate level of police service and that this level is relatively high compared to other cities in the area.

Police services to the City of Paramount are provided by the County of Los Angeles Sheriff's Department. The station serving Paramount is located at 5130 North Clark Avenue, in Lakewood. Current staffing at this station is approximately 250 sworn officers, along with the necessary support staff. Officers from the Lakewood station serve other cities besides Paramount, including Lakewood, Bellflower, Artesia, Hawaiian Gardens, and Cerritos.

Issue – Law Enforcement

The City has also utilized the services of the Los Angeles County Sheriff's Department since incorporation. The Sheriff's Department maintains two substations in the City, one in the Civic Center complex, and a second smaller station in the Citadel. In addition, the Sheriff's Department is able to draw on its extensive resources at the East Los Angeles Station, should the need arise. As indicated in the following policies, the City remains committed to the support of those services provided by the Sheriff's Department.

Health and Safety Policy 26. Provide an atmosphere of security and safety for residents and businesses in Paramount.

Health and Safety Policy 27. Maintain good relations between all citizens and police.

Health and Safety Policy 28. Suppress crime rates to the lowest feasible level with reasonable resource expenditures.

Health and Safety Policy 29. Provide improved lighting in existing or potential crime problem areas.

Health and Safety Policy 30. Encourage "neighborhood watch" programs in conjunction with neighborhood improvement associations to encourage cooperation between citizens and police.

Health and Safety Policy 31. Cooperate with police and probation departments in rehabilitation of Paramount residents involved in crimes through employment assistance, counseling and related programs.

Health and Safety Policy 32. Involve youths in neighborhood improvement programs and City government to provide leisure-time activities and encourage a sense of involvement in the neighborhood and community.

Health and Safety Policy 33. Incorporate defensible space design principles in commercial and multiple family projects.

General Facilities

Military Bases

None have been identified in the City of Paramount

Federal

None have been identified in the City of Paramount

State

None have been identified in the City of Paramount

County

Los Angeles County Fire Station #31
7521 East Somerset Boulevard
Paramount, CA

Inventory of Assets

BY
ant Insurance Services
et

CA 92660 (949) 756-0271

CJPIA PROPERTY SCHEDULE
CITY OF PARAMOUNT

April 13, 2004

Page 1
Includes B & M

Real Property Trend Factor: 1.66%
Personal Property Trend Factor: 1.27%

Address, City, Zip	Occupancy	Construction	Auto Spklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents	Year	Real Property	Personal Property	BI / Rents	Totals
CITY HALL 16400 COLORADO AVENUE PARAMOUNT CA 90723-5050 Stories: 2	15,195 SQ. FT.	Class: C MASONRY CONST/WOOD ROOF Notes: Alarms:	No	1963	0	EQ: B3 Flood: Rent Notes:	No No	No No	No No	*2003* 2004	*$1,575,609* $1,601,764	*$293,574* $297,302	*$0* $0	*$1,869,183* $1,899,066
15300 DOWNEY AVENUE PARAMOUNT CA 90723-4425	38,455 SQ. FT. CITY YARD	Class: C MASONRY CONST/WOOD ROOF Notes: Alarms:	No	1972	0	EQ: B3 Flood: Rent Notes:	No No	No No	No No	*2003* 2004	*$3,794,114* $3,857,096	*$590,911* $598,416	*$0* $0	*$4,385,025* $4,455,512
PUBLIC RECREATION FACILITY 14410 PARAMOUNT BLVD. PARAMOUNT CA 90723	29,206 SQ. FT.	Class: C MASONRY CONST/WOOD ROOF Notes: CERT Alarms:	No	1962	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No	*2003* 2004	*$3,825,743* $3,889,250	*$240,405* $243,458	*$0* $0	*$4,066,148* $4,132,708
PUBLIC RECREATION FACILITY 15500 DOWNEY AVENUE PARAMOUNT CA 90723	3,778 SQ. FT. PLAZA/PRESCHOOL/RESTRO OM	Class: C MASONRY CONST/WOOD ROOF Notes: Alarms:	Yes	1984	0	EQ: B1 Flood: Rent Notes:	No No	No No	No Yes	*2003* 2004	*$2,001,116* $2,034,335	*$173,172* $175,371	*$0* $0	*$2,174,288* $2,209,706
PUBLIC RECREATION FACILITY 6500 SAN JUAN PARAMOUNT CA 90723	600 SQ. FT.	Class: C Notes: Alarms:	No	1990	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No	*2003* 2004	*$74,390* $75,625	*$19,948* $20,201	*$0* $0	*$94,338* $95,826
PUBLIC RECREATION FACILITY 7700 SOMERSET BLVD. PARAMOUNT CA 90723	282 SQ. FT.	Class: A NON COMB STEEL FRAME Notes: Steel frame Plywood sheeting 1/4 masonry veneer FRP interiot Alarms:	No	2001	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No	*2003* 2004	*$70,000* $71,006	*$0* $0	*$0* $0	*$70,000* $71,006

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iver Alliant Insurance Services
1 Dove Street
e 200
rport Beach, CA 92660 (949) 756-0271

CJPIA PROPERTY SCHEDULE
CITY OF PARAMOUNT

Page 3
Includes B & M

Real Property Trend Factor: 1.66%
Personal Property Trend Factor: 1.27%

April 13, 2004

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Spklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents
15		WATER PRODUCT FACILITY 15966 DOWNEY AVENUE PARAMOUNT CA 90723-5116	0 SQ. FT.	Class: C MASONRY CONST/WOOD ROOF Notes: Alarms:	No	1984	0	EQ: B3 Flood: Rent Notes:	No No	No No	No No
16		VARIOUS LOCATIONS PARAMOUNT CA 90723	0 SQ. FT. COMPUTER EQUIPMENT	Class: U UNKNOWN Notes: Alarms:	No	0	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No
17		VARIOUS LOCATIONS PARAMOUNT CA 90723	0 SQ. FT. VARIOUS FINE ARTS	Class: U UNKNOWN Notes: Various fine arts throughout the city Alarms:	No	0	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No
18		VARIOUS LOCATIONS PARAMOUNT CA 90723	0 SQ. FT. MOBILE & SCHEDULED EQUIPMENT	Class: U UNKNOWN Notes: Alarms:	No	0	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No
19		VARIOUS LOCATIONS PARAMOUNT CA 90723	0 SQ. FT. ON PREMISES AUTO	Class: U UNKNOWN Notes: Alarms:	No	0	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No
20		CONCESSION STAND 14410 PARAMOUNT BLVD. PARAMOUNT CA 90723	2,000 SQ. FT.	Class: C MASONRY CONST/WOOD ROOF Notes: Alarms:	No	1992	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No
21		SHUFFLEBOARD COURT 14410 PARAMOUNT BLVD. PARAMOUNT CA 90723	8,000 SQ. FT.	Class: C MASONRY CONST/WOOD ROOF Notes: Alarms:	No	0	0	EQ: B1 Flood: Rent Notes:	No No	No No	No No

Loc #	Year	Real Property	Personal Property	BI / Rents	Totals
15	2003	$111,057	$1,094,210	$0	$1,205,267
	2004	$112,901	$1,108,106	$0	$1,221,007
16	2003	$0	$496,567	$0	$496,567
	2004	$0	$502,873	$0	$502,873
17	2003	$0	$978,202	$0	$978,202
	2004	$0	$989,514	$0	$989,514
18	2003	$0	$918,959	$0	$918,959
	2004	$0	$930,630	$0	$930,630
19	2003	$0	$1,973,676	$0	$1,973,676
	2004	$0	$1,998,742	$0	$1,998,742
20	2003	$260,252	$1,338	$0	$261,590
	2004	$264,572	$1,355	$0	$265,927
21	2003	$208,285	$2,120	$0	$210,405
	2004	$211,743	$2,147	$0	$213,890

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CJPIA PROPERTY SCHEDULE
CITY OF PARAMOUNT

Page 4
Includes B & M

Real Property Trend Factor: 1.66%
Personal Property Trend Factor: 1.27%

April 13, 2004

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Spklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents
22		SHERIFF SUBSTATION 15001 PARAMOUNT BLVD. PARAMOUNT CA 90723-3442	9,450 SQ. FT.	Class: U UNKNOWN Notes: Alarms:	No	0	0	EQ: B3 Flood: Rent Notes:	No No	No No	No No
23		ATKINSON BUILDING 16401 PARAMOUNT BLVD. PARAMOUNT CA 90723 Stories: 2	8,439 SQ. FT.	Class: D ALL COMB (WOOD FRAME) Notes: Alarms:	No			EQ: B1 Flood: Rent Notes:	No No	No No	No No

Loc #	Year	Real Property	Personal Property	BI / Rents	Totals
22	2003	$0	$177,518	$0	$177,518
	2004	$0	$179,772	$0	$179,772
23	2003	$0	$0	$0	$0
	2004	$1,103,602	$0	$0	$1,103,602

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2003	$13,785,614	$7,696,822	$0	$21,482,436
SPRINKLERED:	2003	$2,001,116	$173,172	$0	$2,174,288
UNSPRINKLERED:	2003	$11,784,498	$7,523,650	$0	$19,308,148
EARTHQUAKE:	2003	$0	$0	$0	$0
FLOOD:	2003	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$15,117,901	$7,793,459	$0	$22,911,360
SPRINKLERED:	2004	$2,034,335	$175,371	$0	$2,209,706
UNSPRINKLERED:	2004	$13,083,566	$7,618,088	$0	$20,701,654
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

SIGNED / ACCEPTED BY: _____

DATE: _____

County.Frx

Critical Facilities

CITY OF PARAMOUNT

CRITICAL FACILITIES
(APPENDIX D)

PRIORITY NUMBER FACILITY NAME PHONE	COMMODITY OR SERVICE	1992 THOMAS GUIDE PAGE NUMBER	RESPONSIBLE PARTY ADDRESS PHONE EMERGENCY PHONE
REPORTING DISTRICT 1360			
45 105 FWY/GARFIELD AVE. CITY OF PARAMOUNT	FREEWAY UNDERPASS	735 G-2	CALTRANS. DEPT. COMMUNICATIONS 213-897-4867
46 105 FWY/PARAMOUNT BL. CITY OF SOUTH GATE	FREEWAY UNDERPASS	735 H-2	CALTRANS .DEPT. COMMUNICATIONS 213-897-4867
48 LONG BEACH FWY/ ROSECRANS AV. CITY OF PARAMOUNT	FREEWAY UNDERPASS	735 E-3	CALTRANS. DEPT. COMMUNICATIONS 213-897-4867
REPORTING DISTRICT 1362			
47 105 FWY/DOWNEY AVE. CITY OF PARAMOUNT	FREEWAY UNDERPASS	735 H-2	CALTRANS DEPT. COMMUNICATIONS 213-897-4867
REPORTING DISTRICT 1363			
49 LONG BEACH FWY/ SOMERSET BL. CITY OF PARAMOUNT	FREEWAY UNDERPASS	735 E-4	CALTRANS DEPT. COMMUNICATIONS 213-897-4867
REPORTING DISTRICT 1365			
1 PARAMOUNT PETROLEUM 14700 DOWNEY AVE. PARAMOUNT, 90723	PETRO-CHEMICAL REFINERY (BULK TOXIC CHEMICALS)	735 J-2 **	ON DUTY SUPERVISOR 310-531-2060
16 PARAMOUNT HIGH SCHOOL 14429 DOWNEY AVE. PARAMOUNT 90723 310-602-6064	EDUCATIONAL CTR., MULTI- STAGING CITE	735 J-3	LEN PAGE 310-602-6064 310-602-6977(H)
REPORTING DISTRICT 1366			
2 COOL TRANSPORT 6300 ALONDRA BL. PARAMOUNT 90723 310-630-6500	PETRO-CHEMICAL STORAGE (BULK L.P.G.)	735 E-5**	MR. TAYS COOL 213-630-6500 213-831-8560 (H)

REPORTING DISTRICT 1367

4	LEAVITT'S METAL PLATING 15131 ILLINOIS AVE. PARAMOUNT 90723 310-634-1533	METAL PLATING (ACIDS/CYANIDE BULK QUANTITIES)	737 D-7**	MR. RICHARD LEAVITT 310-634-1533 714-768-5033 310-923-9265
6	SAV-ON PLATING 15523 ILLINOIS AVE PARAMOUNT 90723 310-634-6189	ELECTROPLATING (ACIDS/CYANIDE BULK QUANTITIES)	735 G-4**	JOE TRIMINO JR. 310-634-6189 714-692-2011 JOE TRIMINO SR. 310-634-6189 714-997-2423

REPORTING DISTRICT 1368

5	WALLY'S METAL PLATING 7810 JACKSON STREET PARAMOUNT 90723 310-531-7300	METAL PLATING (ACIDS/CYANIDE BULK QUANTITIES) (LOCATED ADJACENT TO CHARTER SUBURBAN HOSPITAL)	735 G-6**	WALLY 310-531-7300 310-634-0587
14	CHARTER SUBURBAN HOSPITAL 16453 COLORADO AV. PARAMOUNT 90723 310-531-3110	MEDICAL CARE	735 H-6	ON DUTY NURSING SUPERVISOR 310-531-3110
50	CITY OF PARAMOUNT E.O.C. 16420 COLORADO AVENUE PARAMOUNT 90723 562-220-2000	EMERGENCY COMMUNICATIONS CENTER	735 H-4	MR. JOSEPH PEREZ BUENA PARK 562-220-2000 714-952-4514 (H)

REPORTING DISTRICT 1369

15	ALONDRA SCHOOL 16200 DOWNEY AV. PARAMOUNT, 90723. 310-602-6930	EDUCATIONAL CTR., MULTI- STAGING SITE	735 J-6	DALE ENGLER 12809 WOODRUFF AVE. DOWNEY 310-803-5020 (H)

** = the following deputy personnel are assigned as first responders to the above asterisked locations:

#1	**PARAMOUNT PETROLEUM**	**DEPUTY MARCHELLO**
#2	**COOL TRANSPORT**	**DEPUTY SNAPPER**
#4	**LEAVITT'S METAL PLATING**	**DEPUTY LORD**
#5	**WALLY'S METAL PLATING**	**DEPUTY MCGEE**
#6	**SAV-ON PLATING**	**DEPUTY RUIZ**

Critical Service Providers

Cal Trans	(213) 897-0383
	(213) 897-0380
CHP	
	Dispatch (323) 906-3444
	EOC (213) 736-2265
Compton P.D.	(310) 605-5600
Compton Unified School District School Police	(310) 898-6188
	(310) 604-6579
	(310) 604-6578
Downey P.D.	(562) 861-0771
Edison	(800) 684-8123
Lakewood Sheriff's Station Dispatch	(562) 866-9061
Lakewood Sheriff Station EOC	
Contract City Lines (To reach our staff at the Lakewood EOC)	(562) 920-5192
	(562) 920-5193
	(562) 920-5194
	(562) 920-5195
Fax	(562) 867-1765
General (To reach County staff at the Lakewood EOC)	(562) 804-5233
	(562) 804-5234
Recorded message	(562) 804-5239
L.A. County Fire Dispatch	(323) 881-2455
Long Beach P.D.	(562) 435-6711
Media One	
City Access	(310) 216-3500
Public Access	(310) 898-2470
Paramount Fire Station 31	(562) 634-1819
	(562) 634-6559
Paramount Unified School District	See Attached
SEAACA	(562) 803-1629
Pager for on call staff	(310) 885-6268
Pager for Corporal Magana	(310) 609-8707
Pager for Corporal Viaisa	(310) 609-8787
South Gate P.D.	(323) 563-5400
Southern California Gas	(800) 427-2200
Suburban Medical Center	
Business line	(562) 531-3110
Emergency room	(562) 408-7409
Window Board-up (Reliable Board-Up Co.)	(800) 326-3278

Los Angeles County Fire Department Designated High Risk Facilities/Hazardous Materials

Station 57

Pacific Alloy Castings Inc
5900 E. Firesone Blvd
Steel Foundries, NEC

Certainteed Corporation
9301 Garfield Ave
Aspalt Felts & Coatings

Lunday Thagard Company
9302 S. Garfield Ave
Asphalt Felts & Coating

Anadite Inc
10647 S. Garfield Ave
Plating & Polishing

Hughes Brothers Aircrafters Incorporated
11010 Garfield place
Metal Stampings, NEC

Techni-Cast Corporation
11220 S. Garfield Ave
Steel Investment Foundries

Saputo Cheese USA Incorporated
5611 E. Imperial Highway
Cheese, Natural & Processed

Accurate Steel Treating
10008 Miller Way
Steel Foundries, NEC

Dickson Testing Company Incorporated
11126 Palmer Ave
Testing Laboratories

AAA Fume Incorporated
5606 Rawlings Ave
Disinfecting & Pest Control

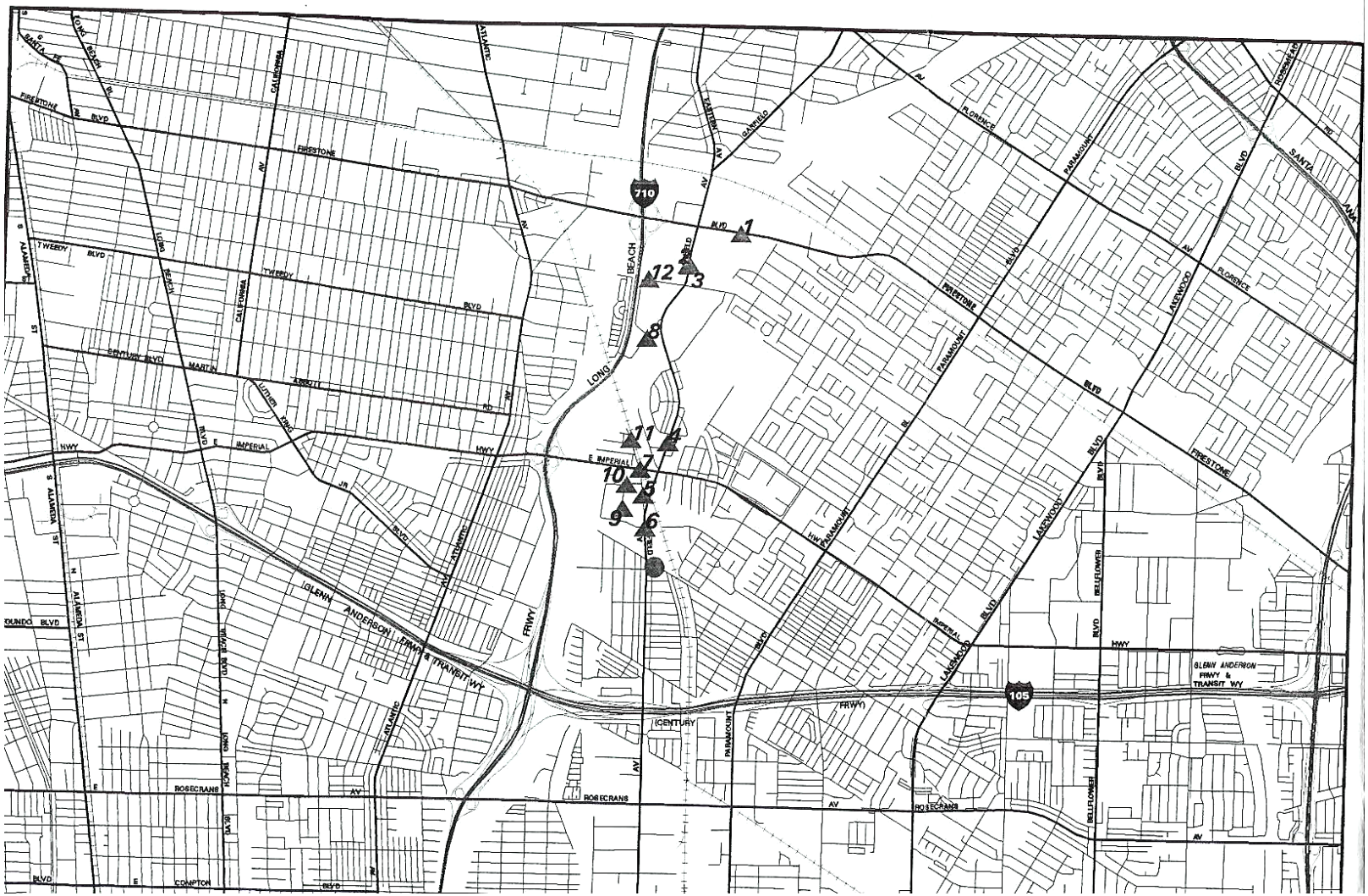
Alpha Meat Packing Company
10615 Ruchti Road
Meat Packing Plants

Blue Diamond Materials
5625 Southern Ave
Asphalt Paving Mixtures & Blocks

Station 57 - High Risk Facilities

County of Los Angeles
Fire Department
Health/Hazmat Division

Legend
High Risk Sites
Station Location



Stration 31

Carlton Forge Works
7743 E. Adams Street
Nonferrous Forgings

Omni Foods Manufacturer
6305 Alondra Blvd
Prepared Feeds, NEC

R & S Processing Company Incorporated
7627 Alondra Blvd
Fabricated Rubber Products, NEC

Arigas West
8103 E Alondra Blvd
Chemicals & Allied Products, NEC

Frank J Zamboni & Company Incorporated
15717 Colorado Ave
Service Industry Machinery, NEC

Rifa USA, Incorporated
15717 Colorado Ave
Chemicals & Allied Products, NEC

Coral Chemical Company
7200 Coral Lane
Soap & Other Detergents

Paramount Petroleum Corporation
14700 Downey Ave
Petroleum Refining

The Jankovich Company
14066 Garfield Ave
Petroleum Bulk Stations & Terminals

Ace Clearwater Die & Manufacturing
14105 S. Garfield Ave
Iron and Steel Forgings

Cerro Metal Products Company
14900 Garfield Ave
Secondary Smelting & Refining of Nonferrous Metal

Anaplex Corporation
15547 Garfield Ave
Plating & Polishing

Evr Gard Coating Company
16400 S. Garfield Ave
Paints & Allied Products

Weber Metals, Incorporated
16706 Garfield Ave
Nonferrous Forgings

California Polishing & Plating
15125 S. Illinois Ave
Plating & Polishing

Sav on Plating Company Incorporated
15523 Illonois Ave
Plating & Polishing

Wally's Metal Polishing & Plating
7810 Jackson Street
Plating & Polishing

Paramount Iceland Incorporated
8041 Jackson Street
Amusement & Recreation, NEC

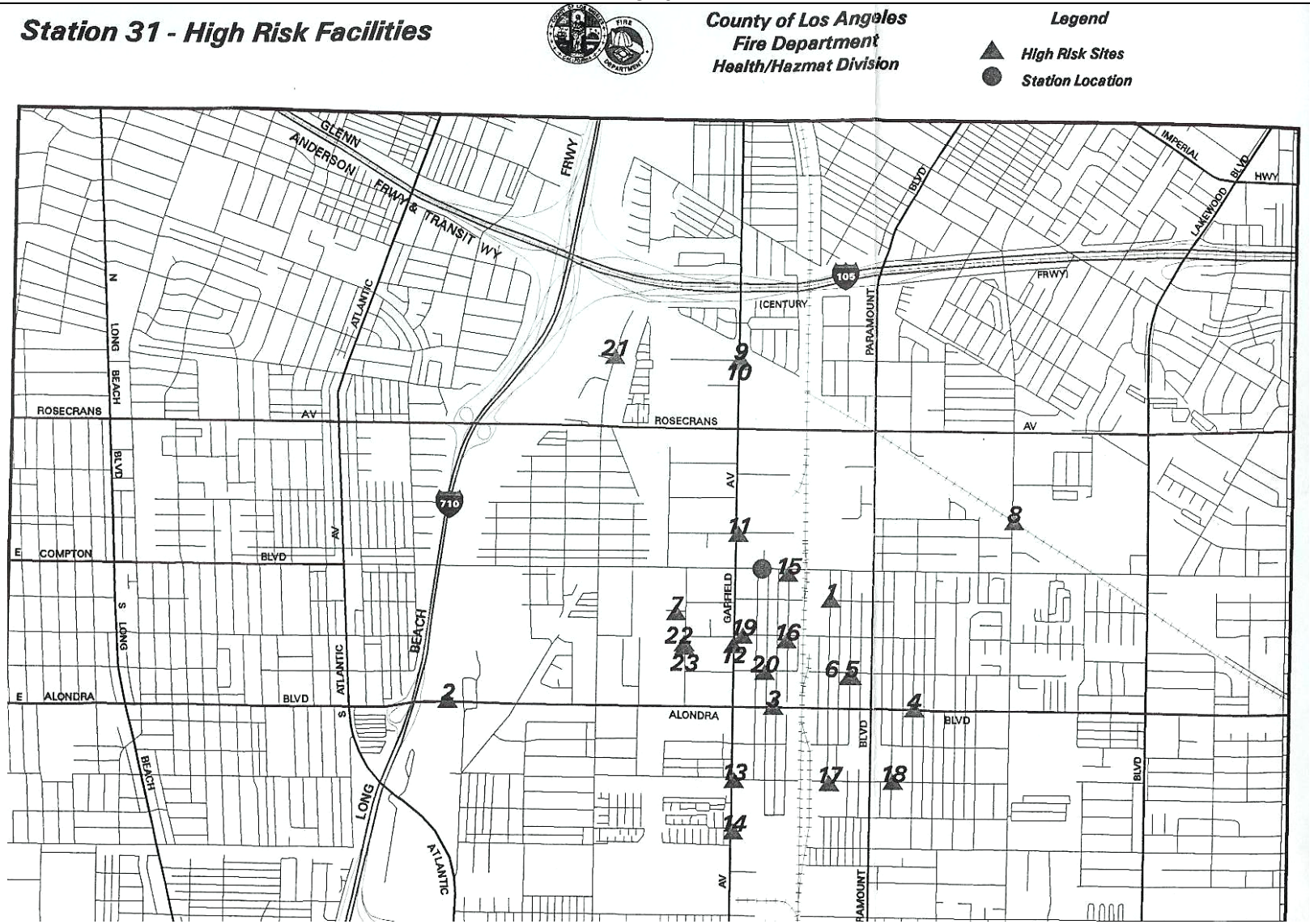
ST & I Incorporated
7517 Jefferson Street
Plating & Polishing

Aerocraft Heat Treating Company Incorporated
15701 Minnesota Ave
Metal Heat Treating

A M Castle & Company
14001 Orange Ave
Metals Service Centers & Offices

Alumatherm Heat Treating
15535 Texaco Ave
Metal Heat Treating

Lockhart Industries Incorporated
15555 Texaco Street
Fabricated Plate Work (Boiler Shops)


Station 31 - High Risk Facilities
County of Los Angeles
Fire Department
Health/Hazmat Division
Legend
High Risk Sites
Station Location
GLENN ANDERSON FRWY & TRANSIT WY
FRWY
ATLANTIC
N LONG BEACH BLVD
ROSECRANS AV
E COMPTON BLVD
E ALONDRA BLVD
S LONG BEACH BLVD
ATLANTIC
LONG BEACH BLVD
710
105
CENTURY
FRWY
PARAMOUNT BLVD
IMPERIAL HWY
LAKEWOOD BLVD
GARFIELD AV
ALONDRA BLVD
PARAMOUNT AV
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Community/Economic Development

There are a number of opportunities related to industrial development in the City, including the following:

- Good Quality industry is actively seeking locations such as those available in Paramount, and any land in Paramount provided with adequate services for industry is likely to be marketable(or example: the Paramount Business Park).

- State and Federal regulations, combined with the City's existing ordinances, provide good protection of neighboring uses form many of the undesirable effects associated with industrial development.

- The City is aggressively seeking improved housing opportunities for new employees.

City of Paramount Land Use Policies (City of Paramount General Plan April 2004)

- Although Paramount is almost fully developed, it is developed at a relatively low density, therefore mitigating some effects of a major earthquake.

City of Paramount General Plan – Economic Development Element

Land Use

The City of Paramount Land Use Element serves as a guide for land use and development within the City. This Element addresses a wide range of issues regarding existing and future land use development in the City. This Element also indicates the location and extent of development permitted throughout the City. Finally, this Land Use Element indicates those areas where existing land uses and development will be maintained as well as those areas where new infill development and/or redevelopment will be encouraged. The primary objectives of this Land Use Element are to manage future growth, to improve the City's physical appearance, and to minimize potential land use conflicts. The scope and content of this Land Use Element is governed by State Law (Section 65302 (a) of the Government Code), that indicates the element must:

- Designate the distribution, location, and extent of land uses for housing, business, industry, open space, recreation, and public facilities

- Establish standards for population density and building intensity for each land use category covered by the plan and

- Indicate appropriate land uses in those areas subject to development constraints, including flooding.

- The creation of a strong employment and commercial base to finance public improvements and services

- The provision of adequate public services and facilities

Land Use Policies

- The development of an orderly pattern of land use in the City
    - Land Use Element Policy 1. The City of Paramount will continue to stimulate large-scale transition to industrial development in the central portion of the City between paramount Boulevard and Garfield Avenue.
    - Land Use Element Policy 2. The City will continue to improve the character of individual neighborhoods through City policies designed to protect and preserve a high quality of life in Paramount.
    - Land Use Element Policy 3. The City of Paramount will provide flexible guidance for specific areas of the City in the form of policy type Specific Plans.
    - Land Use Element Policy 4. The City of Paramount will limit the intrusion of dissimilar uses as a means to minimize potential land use conflicts and incompatibility in the future.
    - Land Use Element Policy 5. The City of Paramount , through continued comprehensive land use planning, will strive to preserve the overall mix of land uses and development in the Community.
- The provision of a variety of housing opportunities
    - Land Use Element Policy 6. The City of Paramount will strive to improve the unity and identity of individual neighborhoods to protect and preserve a high quality of life in Paramount.
    - Land Use Element Policy 7. The City of Paramount will continue to maintain and conserve its existing residential neighborhoods.
    - Land Use Element Policy 8. The City of Paramount will continue to examine future potential opportunities for residential development.
- The development of a wide range of commercial activities
    - Land Use Element Policy 9. The City of Paramount will promote development that capitalizes on the its location near the I-105 Freeway, the 710 Freeway, and the 91 Freeway.
    - Land Use Element Policy 10. The City of Paramount will continue to promote the development of larger, more efficient, commercial retail shopping centers as opposed to smaller “strip commercial” centers.
    - Land Use Element Policy 11. The City of Paramount will continue to preserve and promote the improvement of the existing commercial areas, including those districts located along Garfield Avenue, Paramount Boulevard, and Alondra Boulevard.
    - Land Use Element Policy 12. The City of Paramount will continue to actively pursue the goals and objectives of the Redevelopment Project Areas.

- Land Use Element Policy 13. The City of Paramount will continue to provide safe, convenient pedestrian linkages across and along streets containing strip commercial businesses.

Industrial Development

As indicated previously, industry was and will continue to be an important land use in Paramount serving as a cornerstone in the City's continued vitality. The implementation of the policies listed below will assure the maintenance and preservation of the City's industrial base.

- Land Use Element Policy 14. The City of Paramount will encourage the continued revitalization of its industrial districts to accommodate economic development and growth.

- Land Use Element Policy 15. The City of Paramount will promote the development of modern and attractive business parks that will enhance the community's economic well-being.

Open Spaces

- Land Use Element Policy 16. The City will continue to maintain its open space resources.

- Land Use Element Policy 17. The City of Paramount will develop new open space areas in utility rights-of-way, along the Los Angeles River, and as part of future park development.

Urban Design

- Land Use Policy 18. The City of Paramount will continue to promote the maintenance of existing properties.

- Land Use Element Policy 19. The City of Paramount will continue to work towards improving the appearance of the entryways leading into the City.

- Land Use Element Policy 20. The City of Paramount will continue to work towards the implementation of streetscape and sign standards.

- Land Use Element Policy 21. The City of Paramount will work with adjacent cities to improve the appearance of major entry points into the City.

- Land Use Element Policy 22. The City of Paramount will continue to promote quality design in the review of commercial and industrial development.

- Land Use Element Policy 23. The City of Paramount will continue to employ a design theme in the review of future commercial development and in the rehabilitation of existing commercial uses.

Area Plan Land Use Policies

There are seven Area Plans that have been developed for key neighborhood and districts in the City. These Area Plans are designed to establish more specific policies in selected areas of the City, including those areas targeted for special revitalization and redevelopment efforts. The Area Plans include the following:

- Atlantic Place Area Plan

- Central Business District Area Plan
- Central Industrial District area Plan
- Clearwater East Area Plan
- Clearwater North & Howe/Orizaba Area Plan
- Clearwater West area Plan
- Somerset Ranch Planned community, (includes Paramount Place Area Plan and the Downey/Somerset Area Plan)

Commercial

This designation applies to a wide range of land uses involved in retail sales and services. Development included in this land use designation may be characterized by smaller neighborhood commercial establishments, community shopping centers, office developments, and other service-related activities. The nature and extent of permitted uses included in this category are established through the City's Zoning Ordinance, the use of "Planned Development" standards, or through the use of specific plans. The development standards for this land use category relies on the floor area ratio or FAR. The maximum allowable FAR intensity is 2 to 1.

Industrial

The Industrial land use classification includes those land uses involved in manufacturing, processing, and warehousing activities. The nature and extent of permitted uses included in the Industrial land use designation are governed by the City's Zoning Ordinance, the "Planned Development" standards, or through the use of specific plans. The development standards for this land use category also rely on the FAR with the maximum allowable intensity of 2 to 1.

Business Park

The Business Park land use designation promotes planned development that integrates light industrial, limited retail commercial, and office uses into contemporary development designs. Commercial and office uses should be of a type that serve and reinforce the light manufacturing establishments that are part of the development. This designation must be implemented either by Planned Development with Performance Standard zoning or regulatory specific plans. The maximum allowable intensity is a FAR of 2 to 1.

City of Paramount General Plan – Land Use Element

Water/Waste Water/Sewer

The following are water purveyors and waste water service providers for the City of Paramount:

Water: Paramount Water Company
Waste Water/Sewer: Los Angeles County

The Public Facilities element examines needs for public facilities in Paramount, identifies, the existing status of these facilities, and proposed ways in which the capacity and distribution of facilities can be

better related to needs. Facilities and services considered include water, sewage and flood control facilities, schools, libraries and health care facilities.

Public facilities and services in Paramount come under a number of different jurisdictions including City, Los Angeles County and a variety of special districts. Planning for these facilities has thus not always been well interrelated, and the potential exists for improving location and distribution of facilities to better serve the community. Coordination between these different jurisdictions can be improved to allow for more efficient planning.

Considerable progress in this area has been accomplished in the past several years.

- Water and Waste Management. Water and waste management systems are regional in their impact, and regional agencies have primary responsibility for system characteristics in the Los Angeles area:

- Los Angeles County Engineer. Major refuse disposal facilities, major storm drains, major sewage systems, major distribution coordination, industrial pollution control, contract City services.

- Sanitation District. Major sewage facilities (treatment, disposal). Flood Control District: Major flood control facilities (channels, spreading grounds, dams, etc.).

- Paramount. Local refuse collection, local water distribution.

- Water Systems. The City is serviced by two different companies, the largest of which is the City of Paramount Water Department. The source of water supply is groundwater which is pumped through wells distributed throughout the City. The City's wells are drawing water from the Central Basin in Los Angeles County. The static water level is currently at 70 feet. For fiscal year 2004-2005, the City will pump 80% (approximately 2,000 acre feet) Metropolitan Water District water.

Solid Waste Facilities

There are no active landfill facilities within Paramount. The City presently contracts primarily with a private company for the collection of solid waste in the City. This contract becomes exclusive for all solid waste collection in 1994. The company transports the refuse to landfill or disposal sites outside the City. There is no indication that adequate capacity is a major concern to the City. However, a solid waste and resource recycling facility which can receive up to 500 tons of non-hazardous waste daily form the City is now under construction. Valuable materials will be recovered from the waste stream and the remaining waste loaded into 40' transfer trailers and hauled to local landfills for disposal. The facility is located at 7230 Petterson Lane in an M-2 Heavy Industrial zone and is surrounded by compatible land uses. A Conditional Use Permit for the project was granted by the City of Paramount in 1985. The owner/operator of the site is the Metropolitan Waste Disposal Company.

Refuse collection vehicles and transfer trailers using the site will travel on either Rosecrans or Garfield Avenues. Both streets are major truck arterials with two lanes of traffic in each direction and separate left turn lanes and signals at intersections. Immediate access to the site will be from Garfield Avenue onto Petterson Lane.

Storm Drainage

Flood control and storm drainage in Paramount are the basic responsibility of the Los Angeles County Flood Control District. The City works closely with the district in making local drainage plans and improvements. A master plan of drainage is scheduled to be prepared by the City to determine which areas presently have drainage facility deficiencies and identify the improvement priorities for areas that are in greatest need of assistance.

Master Plan of Drainage was written June 1998 for the City of Paramount by Willdan Associates.

Flood hazard is considered to be minimal within the boundaries of the City of Paramount, however, County efforts are under way to map flood zones within the City. When this work effort is completed the City will prepare standards to regulate development within the 100-year flood boundaries in order to minimize flood hazard.

Sewerage System

Sewer facilities in the City of Paramount are City-owned. Maintenance of these facilities is the responsibility of the Department of County Engineer-Facilities Sanitation Division. According to the County Engineers and City, there are no major problems currently in Paramount's existing sewer system.

The City's sewage lines discharge into the Los Angeles County Sanitation District Number 2 Trunk Facilities and flow to Los Angeles County Sanitation District Treatment Facilities. Wastewater from Paramount is treated at the District's Joint Water Pollution Control Plant. Currently, the treatment plant is not experiencing any capacity problems. The plant's capacity is 385 million gallons per day (mgd) and is currently experiencing average flows of 374 mgd.

A sewer master plan is similar scope to the already adopted water master plan is envisioned by the City to ensure continued adequacy of lines and treatment capacity.

Opportunities

- Use of flood control district and sanitation district resources is possible if these agencies are provided good information on needs and priorities.
- Redevelopment with tax increment financing provides an appropriate vehicle for improvement of water and waste systems.
- Paramount has a unique ability to finance certain public improvement projects with redevelopment funds for areas outside the redevelopment project area.
- Provision of adequate flood protection for residents and business is possible through local funding of flood control projects not supported by the County Flood Control District if necessary.
- Forthcoming sewer and drainage master plans will clarify system requirements for the development now envisioned.

Goals and Objectives

- Maintain adequate water quantity and existing water quality.

- Provide water storage and delivery capacity to meet normal usage and fire requirements.
- Maintain economical and responsive solid waste collection and disposal services.
- Provide satisfactory flood protection to residents and businesses.
- Determine industrial pollution conditions and reduce identified levels in cost effective ways.
- Provide adequate sewerage service to develop and redeveloped areas ensure that waste disposal practices are in accordance with policies and procedures of the Sanitation Districts of Los Angeles County.

Policies and Programs

- Protect, conserve, and enhance water resources through implementation of the water master plan.
- Continue efforts to consolidate water companies under City ownership and operation.
- Require improved solid waste collection, disposal, and recycling techniques by local collection services to reduce noise and disorder on residential streets and conserve environmental resources.
- Conduct an industrial pollution and hazardous materials survey and analysis as the basis for corrective actions.
- Prepare a flood control and drainage master plan identifying existing potential facility deficiencies based on the General Plan, and means of correcting those deficiencies.
- Prepare a sewage facility master plan identifying existing and potential facility deficiencies based on the General Plan and means of correcting those deficiencies.

City of Paramount General Plan – Public Facilities Element

Schools

The Paramount School District, unified in 1953, encompasses approximately seven square miles and services almost all of the City of Paramount. The Paramount Unified School District operates eight elementary schools, two high schools, and two intermediate schools.

Providing a quality education is a priority for the Paramount Unified School District, which operates 16 school sites, three preschool programs, and an Adult Education Center. The District administrative office is located at:

15110 California Avenue
Paramount CA 90723
(562) 602-6000

The District is governed by a five-member Board of Education, who works closely with community leaders to ensure academic excellence for Paramount residents. Community support for education is high, as demonstrated by enthusiastic endorsement of a $35 million bond measure to build new schools and modernize existing school facilities.

The District's emphasis on school safety and a healthy, productive learning environment has earned international, national, and state recognition.

Opportunities

Localized drops in enrollments may allow better utilization of existing facilities.
Efficient joint use of school facilities has been achieved by cooperation between the City and the school district.

- The majority of new housing is expected to have very low student generation rates.

Goals and Objectives

- Provide quality education for Paramount students, oriented to their career needs.
- Maintain cooperation between the City and the Paramount Unified School District to best meet the needs of both.
- Achieve, by whatever cooperative means possible, quality maintenance of school facilities for joint use purposes.

Policies

- Continue joint use of school buildings and playgrounds for recreation on a non-interfering basis.
- Work closely with the school district in anticipating school impacts of new housing development.
- Work with the School District on establishing improved facility maintenance.

Public High Schools in Paramount:

- Paramount High (Students: 3,864; Location: 14429 S. Downey Ave.; Grades: 09 - 12)

Biggest Public Primary/Middle Schools In Paramount:

- Gaines (Wesley) Elementary (Students: 1,145; Location: 7340 E. Jackson; Grades: KG - 08)
- Orange Avenue (Elem) (Students: 1,138; Location: 15733 S. Orange Ave.; Grades: KG - 08)
- Roosevelt Elementary (Students: 1,074; Location: 13451 Merkel Ave.; Grades: KG - 08)

- Los Cerritos Elementary (Students: 966; Location: 14626 Gundry Ave.; Grades: KG - 08)
- Alondra (Elem) (Students: 956; Location: 16200 S. Downey Ave.; Grades: Kg - 08)
- Wirtz (Harry) Elementary (Students: 935; Location: 8535 Contreras St.; Grades: KG - 08)
- Paramount Park (Elem) (Students: 891; Location: 15110 South California Ave.; Grades: Kg - 08)
- Keppel (Mark) Elementary (Students: 824; Location: 6630 E. Mark Keppel St.; Grades: Kg - 08)
- Mokler (Major Lynn) Elementary (Students: 792; Location: 8571 E. Flower St.; Grades: Kg - 08)
- Jefferson Street (Students: 749; Location: 8600 Jefferson St; Grades: Kg - 08)

Private Primary/Middle School in Paramount:

- Our Lady Of The Rosary (Students: 314; Location: 14813 Paramount Blvd; Grades: Kg - 8)

Utilities

- Electrical Power is supplied by Southern California Edison Company.
- Natural Gas is supplied by Southern California Gas.
- Cable TV is supplied by Comcast
- Telephone service is supplied by SBC

Health Care

Hospitals

Health facilities in Paramount include a 184-bed private hospital located near City Hall and a convalescent center.

Professional medical offices presently exist adjacent to Suburban Hospital. This hospital offers a full range of services typically found in a community hospital, including a very well staffed emergency room which is also a paramedic base station.

Opportunities

- Conversion of uses west of the hospital (including a portion of the railroad right-of-way) may open up an opportunity for improved access.

Goals and Objectives

- Maintain competent and convenient health care and emergency medical services for Paramount residents and employees.
- If possible, improve emergency access to Charter Suburban Hospital.

Policies and Programs

- Consider health/medical facilities as part of the Douglas Center complex if market demand and need are positive.
- Explore the feasibility of extending Vermont Avenue between Jackson Street and Harrison Street or, if that is not feasible, an alternate emergency access route.
    - Suburban Medical Center (16453 So Colorado Ave)

Higher Education

Technical Institutes/Colleges

Paramount School of Beauty (Full-time enrollment: 35; Location: 8527 Alondra Blvd Ste 129; Private, for-profit)

Associated Printing Schools, Inc.+ (Location: 8026 Somerset; Private, for-profit)

Business & Industry

Manufacturing

OCCUPATION		
Management, professional, and related occupations	3,399	18.0
Service occupations	2,958	15.7
Sales and office occupations	4,950	26.2
Farming, fishing, and forestry occupations	34	0.2
Construction, extraction, and maintenance occupations	1,988	10.5
Production, transportation, and material moving occupations	5,529	29.3
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	58	0.3
Construction	1,338	7.1
Manufacturing	4,609	24.4
Wholesale trade	1,028	5.5
Retail trade	2,109	11.2
Transportation and warehousing, and utilities	1,372	7.3
Information	422	2.2
Finance, insurance, real estate, and rental and leasing	924	4.9
Professional, scientific, management, administrative, and waste management services	1,382	7.3
Educational, health and social services	2,863	15.2
Arts, entertainment, recreation, accommodation and food services	1,418	7.5
Other services (except public administration)	950	5.0
Public administration	385	2.0
CLASS OF WORKER		
Private wage and salary workers	15,678	83.1
Government workers	2,036	10.8
Self-employed workers in own not incorporated business	1,102	5.8
Unpaid family workers	42	0.2

-Represents zero or rounds to zero. (X) Not applicable.
[1]If the denominator of a mean value or per capita value is less than 30, t
See text.

Source: U.S. Bureau of the Census, Census 2000.

Retail

A New Kitchen Inc.
Information about services, showcase, products, and process.
http://www.anewkitcheninc.com/home.html

AM Windows
About us, vinyl windows, brands, and stucco.
http://www.am-windows.com/

Anilta
Provides website design and development, hosting, and search engine optimization services to small and medium size firms. Includes services and clients.
http://www.anilta.com

Casa El Rey
Mexican restaurant serving authentic foods. Includes menu features.
http://www.casaelrey.com

Fun Services CA
Originators of the Santa's Secret Shop program for schools. We present games, booths, prizes, and concessions.
http://www.funservicesca.com/index2.ivnu

I and E Cabinets
Provider of refacing and custom cabinetry. Includes photos and free consultation request form.
http://www.iecabinets.com/

Mid Cities Honda
Street motorcycles, offroad dirtbikes, ATVs, scooters and generators, SeaDoo and Jet Skis.
http://www.mid-citieshonda.com

Options In Design
Reupholstering existing furniture.
http://www.optionsindesign.com

Presstige Printing
Printing and graphic design. Services and online ordering.
http://www.presstige.com/

Rayvern Lighting Supply Co.
Lighting company focused on energy efficient and environmentally friendly products.
http://www.rayvern.com/

SpiGlobal
Offers web design, database programming, online streaming, marketing, and graphic design. Offices in Paramount, San Rafael, and New Brunswick, Canada.
http://www.spiglobal.com/

Tamper-Pruf Screws
Product line, product numbers and express line.
http://www.tamperprufscrews.com/

Tech Coat Contractors Inc.
Flooring, protective coating and containment lining systems.
http://www.techcoat.com/
Thomas Acoustics
Company information, services and projects.
http://thomasacoustics.com/

Recreation

The City of Paramount has nine parks, two public swimming pools, and a number of other recreational sites available for use by residents and community groups. Parks feature safe, state-of-the-art playground equipment. Facilities such as the Paramount Gym, the Community Center, Progress Park Plaza, and the Village Skate Park are well-maintained and well-equipped resources offering a variety of uses.

Transportation

There are a number of key programs the City will continue to implement or undertake as part of the implementation of this General Plan. These existing and proposed programs are identified below.

Capital Improvement Planning. The City's Capital Improvement Program (CIP) is a five-year plan that indicate the timing of major capital expenditures. Individual projects are reviewed and ranked on an annual basis, and may include streetscape upgrades, installation of traffic signals, slurry seal for streets, sidewalk repair, and sewer line upgrades. The City will continue to update, review, and implement its CIP to improvements.

Freeways

I-105, the 710, and 91 Freeway

Caltrans Coordination. The City will coordinate efforts with Caltrans to upgrade area freeways. The purpose of this undertaking is to ensure that the City is fully appraised of roadway and facility improvement efforts in the early stages of planning and design. The City will continue to work with Caltrans and the Metropolitan Transportation Authority (MTA), as appropriate, and will request to be on all notification lists for future projects that may impact the City.

Major Highways

The roadway system in Paramount has been defined using a classification system that describes a hierarchy of roadway types. The categories of roadways included in this classification system differentiate the size, function, and capacity of each type of roadway. Streets in the City also classified according to their primary function, consisting of four types of roadways. The roadways are described below and are shown in cross section views in Exhibit 3.2.

- Major Arterials. Typically contain 84 feet of paving within a 100-foot right-of-way. Lanes are 12 feet wide, and the center median or turn lane is 16 feet wide.

- Secondary Streets have an 80 foot wide right-of-way with 64 feet of paving.

- Collector Streets provide circulation in a defined geographic area of the City and connects this area to secondary street, arterials, and freeways.

- Local Streets are subordinate to the basic circulation network described above.

Railways

Southern Pacific Transportation Company Railroad line parallels the northern City limits and Century Boulevard but is located 2,000 feet south of the City boundary. This line is not in daily use at present although it is utilized occasionally. The right-of-way along this line is currently being sold to each City for future use as a light commuter rail between the Los Angeles River and the City of Corona.

Mass Transit

The Metropolitan Transportation Authority (MTA) routes include; route 125 on Rosecrans Avenue, Route 127 on Somerset Boulevard, Route 128 on Alondra Boulevard, and Route 265 on Paramount Boulevard. Long Beach Transit offers routes: (1) northerly from the southern City limit on Orange Avenue to Rosecrans Avenue then westerly (Route 7); (2) northerly on Paramount Boulevard and Downey Avenue then westerly on Alondra Boulevard (Route 22); and (3) northerly on Garfield Avenue to Alondra Boulevard then westerly (Route 21.

Public Transit Review Program. The City will evaluate the need to modify routes, schedules, and fares of local transit service to achieve circulation goals and policies (e.g. coordinate the local transit system with the regional transit system). The City will also continue to work with the MTA and other transit service agencies in adjacent communities to identify the most beneficial route and stops in the City. The City will provide development plans to service providers for review for those projects that may affect public transit.

Transit Centers. Transit centers consisting of bus turnouts and loading areas, weatherproof shelters, information centers, emergency phones, an in some areas park-n-ride facilities, will be implemented as part of new development. The Lead City Agency to study the feasibility of developing “transit centers” will be designated by the City Administrator.

Map of Truck Routes & Railroads

Non-profit & Community-based Organizations

Non-profit

- Alpha Delta Omega — 14138 Orizaba Ave.
- American Legion Post #134 — 7550 E. Somerset Blvd.
- Amvets Post #7
- Paramount Elks Lodge BPOE — 8108 Alondra Blvd.
- Goodwill Stores — 8524 Alondra
- Hynes D.E.S., Inc — P.O Box 484

Community-based Organizations

- Communication Workers of America — 78944 Rosecrans Ave.
- Gateway Cities Partnership, Inc. — 8303 Alondra Blvd. Ste B
- Head Protection Research Laboratory — 6409 Alondra Blvd
- Holland Soccer Club — 7310 A. Adams Street
- House of Angels Nursing — 8309 Jackson
- I U P I W — 8131 Rosecrans
- Jesus Ruiz Program — 14915 San Marino
- Kid's Club — 15726 Perilla Ave. #4
- Lions Club of Paramount — P.O. Box 1100
- Paramount Chamber of Commerce — 15357 Paramount Blvd.
- Paramount Communication Alert — 16242 Orizaba Ave.
- Paramount Lady Elks — 8108 Alondra Blvd.
- Paramount Womens Club — 8411 Fairton
- Paramount Youth Football & Cheer — 13737 Fairlock Ave.
- REI WIC Program — 16260 Paramount Blvd.
- Paramount Rotary Club — P.O. Box 1988
- Sociedad Progresista Mexicana — 15927 Colorado Ave.
- Soroptimist Int'l of Paramount — P.O Box 824
- Suburban Medical Center Volunteers — 16660 Paramount Blvd. Ste. 311
- Traditional Artists' Guild — P.O Box 936
- UAW-CIO — 14910 Garfield Ave.
- Veterans of Foreign Wars — 13903 Florine Ave.

Climate

Local Meteorology

Average weather in Paramount, California

Based on data reported by over 4,000 weather stations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average temp. (°F)	57.8	59.2	60.5	63.9	66.6	70.8	74.7	75.8	74.2	69.3	62.6	58.0
High temperature (°F)	68.5	69.6	70.2	74.2	75.7	80.3	84.9	86.1	84.5	79.9	.9	69.4
Low temperature (°F)	47.1	48.7	50.7	53.4	57.5	61.2	64.5	65.5	63.9	58.7	51.2	46.5
Precipitation (in)	3.3	3.7	2.8	0.8	0.2	0.1	0.0	0.1	0.3	0.4	1.2	1.9

Severe Weather

Santa Ana Winds

The *Santana Winds* or *Santa Ana Winds*, most common in the late summer and early fall, begin with dry air moving in from the interior of the U.S. towards Southern California. As this air flows down into the Los Angeles Basin through the low gaps in the mountains (notably **Cajon Pass** on the east end of the San Gabriel Mountains and **Soledad Pass** south of Palmdale), it compresses and warms about five degrees Fahrenheit for every 1,000 feet that it descends. Though these winds are much cooler high in the mountains, they can become hot and dry and assume gale force when descending into the Los Angeles Basin. They are often the source of air turbulence for aircraft approaching Los Angeles International Airport.

The original spelling of the name of the winds is unclear, not to mention the origin. Although the winds have been commonly called *Santa Ana Winds* or *Santa Anas*, many argue that the original name is *Santana Winds* or *Santanas*. Both versions of the name have been used. The name *Santana Winds* is said to be traced to Spanish California when the winds were called *Devil Winds* due to their heat. The reference book *Los Angeles A to Z (by Leonard & Dale Pitt*), credits the Santa Ana Canyon in Orange County as the origin of the name *Santa Ana Winds*, thereby arguing for the term *Santa Anas*. This might be supported by early accounts which attributed the Santa Ana riverbed running through the canyon as the source of the winds. Another account placed the origin of *Santa Ana Winds* with an Associated Press correspondent stationed in *Santa Ana* who mistakenly began using *Santa Ana Winds* instead of *Santana Winds* in a 1901 dispatch.

Special credit for the research assistance of Librarian Nancy Smith of the Metropolitan Cooperative Library System Reference Center, Los Angeles Public Library.

Threatened & Endangered Species

While protection of endangered species and historic buildings is a mitigation consideration for this jurisdiction it must also be noted that the Federal Cost Benefit Analysis does not allow for a specific value for either the historic status of a structure of the endangered distinction of a species.

Section 4 – Hazard Vulnerability Analysis

Table of Contents

Section 4 – Hazard Vulnerability Analysis 1

Table of Contents 1

Section 4 – Hazard Vulnerability Analysis 3

Hazard Definitions 3

Hazard Ratings 5

Hazard Matrix Results 8

Los Angeles County Disasters Since 1950 9

State of California Governor's Office of Emergency Services 14

Natural Hazards (Listed in alphabetical order) 15

Biological & Human Disease 15

Drought 20

Earthquake 22

Flood 60

Severe Weather & Destructive Winds 64

Technological & Human-caused Hazards (Listed in alphabetical order) 74

Dam Failure 74

Data & Telecommunications Loss 76

Economic Loss 83

Explosions 88

Terrorism & Weapons of Mass Destruction (WMD) 91

Transportation Accident/Incident 96

Transportation Failure 101

Utility Loss 108

Water/ Waste Water/Sanitation Loss 114

Impact of Hazards 116

Section 4 – Hazard Vulnerability Analysis

Hazard Definitions

Kinds of Hazards

This Health and Safety Element establishes City policy relative to the reduction and mitigation of natural and manmade hazards that must be considered in future planning and decision-making. The public's health and safety has been an important component of the City's General Plan due to the City's location in a seismically active region. The element's scope has been expanded to include flooding, fire, hazardous materials, public safety, emergency preparedness and response, and noise.

This Health and Safety Element meets the State's requirements for a safety element and noise element. The Health and Safety Element is concerned with identifying these hazards and providing ways to reduce the risk of property damage, injuries or loss of life associated with living in an urban environment. State law requires every safety element to include the following components:

- The identification, mapping, and appraisal of seismic hazards that should be of concern to planning and future development, including areas subject to liquefaction, ground-shaking, surface rupture or seismic sea waves (Section 65302(f));
- An appraisal of mudslides, landslides, and slope stability that might occur as a result of a seismic disturbance (Section 65302(f)); and,
- The identification of the potential for fires and other natural and manmade disasters and measures designed to reduce the loss of life, injury, and damage to property (Section 65302(i)).

This Element contains a plan that identifies evacuation routes and the locations of emergency shelters. The Health and Safety Element also emphasizes the importance of emergency preparedness in reducing the impacts of natural and manmade disasters. Effective disaster response requires the cooperation of many governmental agencies. A primary goal of the City is to continue working with other agencies, both to prevent accidents (as much as this is possible) and to minimize risk.

Early Safety Element Requirements

> **The seismic safety element was one of the first mandatory general plan elements. Since 1970, changes in planning law required those issues previously considered in seismic safety elements to be incorporated into "safety elements," the scopes of which were broadened to consider other safety-related issues of concern. Seismic hazards, though, continue to be a central theme of the Health and Safety Element of the Paramount General Plan. Since the last update, the City has experienced the damaging effects of two nearby earthquakes...the 1987 Whittier earthquake and the 1991 Northridge earthquake. Both of these earthquakes revealed that there was a much more extensive fault system underlying the Los Angeles Basin compared to what was previously thought. It is probable that an earthquake of even greater intensity will occur sometime during the "life" of this General Plan.**

As indicated previously, this Element also addresses those issues mandated by the State for consideration in noise elements. The State recognizes that noise may have a significant impact on a community's well-being, and therefore requires all jurisdictions to prepare a noise element to identify ways to minimize exposure to excessive noise levels.

The State guidelines are very specific as to the content of noise elements. Government Code Section 65302(f) indicates that the noise element should be prepared according to guidelines established by the State Department of Health Services. At a minimum, the Government Code requires that the Element analyze and project noise levels for:

- Highways and freeways;
- Primary arterials and major local streets;
- Passenger and freight on-line railroad operations and ground rapid transit systems;
- Commercial, general aviation, heliport, helistop, and military airport operations; aircraft overflights, jet engine test stands, and all other ground facilities and maintenance functions related to airport operations;
- Local industrial plants, including, but not limited to, railroad classification yards; and,
- Other ground stationary sources identified by local agencies as contributing to the community noise environment.

The State General Plan guidelines further indicate that noise exposure information should be used to develop the Land Use Element to achieve noise-compatible land use patterns (Section 5302(f)). Because land use patterns in Paramount generally are well-established, this element focuses on resolving existing noise concerns. The policies related to noise issues stress the importance of protecting residents from excessive noise. Complementary policies, and programs that address noise impacts, are also found in the Community Development and Housing Elements.

The Health and Safety Element is organized according to the following sections, reflecting the format of the other Elements included in the Commerce General Plan:

- The *Introduction to the Element* section provides an overview of objectives with suspect to health and safety, summarizes key issues, and discusses this Element's relationship to the other General Plan elements.
- The *Health and Safety Policies* section states the City's vision with respect to emergency preparedness and response, as well as environmental health.
- The *Health and Safety Plan* indicates standards and plans related to emergency preparedness, response, and environmental health.

The Disaster Preparedness Component of the General Plan deals primarily with response to disasters. Each city in California is required to maintain a disaster plan. The Sheriff's Department in Los Angeles County has been given the authority for the development of disaster plans for the County and coordinates plans for each city. Three agencies are involved in carrying out the disaster plan for the City. These are the Sheriff, the County Fire Department, and the City government. Each has established a plan of operations. Emergency communication facilities have been set up so that in case of an emergency, each agency is aware of the activities of all other agencies.

Health & Safety Policies & Programs

Issue – Emergency Response

The following policies underscore the City's continued commitment to identifying strategies that will improve the community's overall safety. The policies contained in this section promote education and prevention as a means to address a number of safety-related issues.

- *Health and Safety Policy 1.* Minimize damage to life and property in the City of Paramount in the event of a major disaster.
- *Health and Safety Policy 2.* Identify and improve existing areas not meeting fire or earthquake standards.
- *Health and Safety Policy 3.* Identify areas of high risk (high densities, older structures, fire hazards) for priority disaster response.
- *Health and Safety Policy 4.* Identify and publish an inventory of alternative emergency systems in the City (portable water, water for rue protection, water delivery systems, communication, security, waste collection, and emergency power for critical facilities).
- *Health and Safety Policy 5.* Identify protected structures for use during disasters and inform appropriate disaster assistance agencies of their location and capabilities.
- *Health and Safety Policy 6.* Assign disaster response duties to all public employees, providing them with necessary instructions.

Hazard Ratings

Hazard Rating Definitions

Rate each hazard by priority category.

0= No Risk in accordance with the definitions for hazard prioritization definitions listed below

1= Low Risk in accordance with the hazard prioritization definitions listed below

2= Moderate Risk in accordance with the hazard prioritization definitions listed below

3= High Risk in accordance with the hazard risk definitions listed below

Total the numbers horizontally for each hazard category. The highest possible score for a hazard is 24; the lowest is 0.

Definitions for Hazard Prioritization

Magnitude

Physical and Economic Greatness of a risk-caused event.

Factors to consider:

- Size of Event
- Threat to life
- Threat to Property
    1. Individual
    2. Public Sector
    3. Business and Manufacturing
    4. Tourism

Duration

The length of time the effects of a risk-caused event would last.

Factors to consider:

- Physical duration during emergency phase
- Length of time of threat to life and property
- Physical duration during recovery phase
- Length of time of effects on individual citizens and community recovery
- Length of time of effects on economy, tax base, business and manufacturing, tourism, and employment

Distribution

The depth of impact of a risk-caused event among all sectors of the community

Factor to consider:

- How wide spread across the jurisdiction is the effects of the disaster?
- Are all sectors of the community affected equally or disproportionately?

Area Affected

How large of an area is physically threatened or potentially impaired by a risk-caused event?

Factors to Consider:

- Geographic area affected by primary event.
- Geographic, physical, economic areas affected by potential secondary effects.

Frequency

The historic and predicted rate of recurrence of a risk-caused event (generally expressed in years such as the 100-year flood)

Factors to consider

- Historic events and recurrences of events in a measured time frame.

Probability

The degree of likelihood or calculated odds that is a risk-caused event would occur (such as a 62% chance of a magnitude 6.7 earthquake along a given fault within a 30 year period).

Factors to consider:

- Scientifically-based predictions for occurrence of an event in a given period of time.

Degree of Vulnerability

How susceptible are the population, community infrastructure and state resources to the effects of a risk-caused event.

Factors to consider:

- History of the impact of similar events.
- Mitigation steps taken to lessen impact.
- Community preparedness to respond to and recover from the event.

Community Priorities

The importance placed on a particular risk by the citizens and their elected officials.

Factors to consider:

- Willingness to prepare for and respond to a particular risk.
- More widespread concerns over a particular risk then other risks.
- Cultural significance of the threat associated with a risk.

Hazard Matrix Results

High Risk Priority Hazards

Earthquake	Natural
Utility Loss	Human-caused
Floods	Natural
Transportation Accident/Incident	Human-caused
Water/Waste Water/Sanitation Loss	Human-caused
Terrorism & Weapons of Mass Destruction (WMD)	Human-caused
Explosions	Human-caused

Moderate Risk Priority Hazards

Transportation Failure	Human-caused
Severe Weather & Destructive Winds	Natural
Economic Loss	Human-caused
Biological/Human Disease	Natural
Data Telecommunication Loss	Human-caused
Urban Fire	Human-caused

Low Risk Priority Hazards

Drought	Natural
Dam Failure	Human-caused

Los Angeles County Disasters Since 1950

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
Flood	Floods	OCD 50-01	1950	Statewide	11/21/50	Not declared	9		$32,183,000
Flood	Fire, Flood, and Erosion	DR-28	1954	Los Angeles, San Bernardino	2/5/54	2/5/54			Not Avail
Flood	Floods	DR-47	1955	Statewide	12/22/55	12/23/55	74		$200,000,000
Fire	Fires	DR-65	1956	Los Angeles (Malibu area), Ventura		12/29/56	1	Several hundred	$70,000,000
Fire	Fires	CDO 58-01	1958	Los Angeles	1/3/58	Not declared	1	23	Not available
Flood	Storm & Flood Damage	N/A	1958	Statewide	4/2/58	82	13		$24,000,000
Flood, Landslide	Potential Flood Damage and Landsides as a Result of Fires	CDO 59-01	1959	Los Angeles	1/8/59	Not declared			Not applicable
Fire	Major and Widespread Fires	N/A	1960	Los Angeles, San Bernardino	7/21-22/60	Not declared		12	$10,000,000
Fire	Bel Air Fires	DR-119	1961	Los Angeles		11/16/61		103	Between $50,000,000 - $100,000,000
Flood	Flood and Rainstorm	DR-122	1962	Los Angeles, Ventura	2/16/62 & 2/23/62	3/6/62			Not available
Flood	Baldwin Hills Dam Failure	DR-161	1963	Los Angeles	12/16/63	12/21/63			$5,233,203
Severe Storm, Flood	Abnormally Heavy and Continuous Rainfall	N/A	1963	Northern California (boundaries of San Luis Obispo, Ventura, Los Angeles, and San Bernardino counties to the Oregon State Line	2/14/64	Not declared			Not Available
Fire	Major Widespread Fires (Weldon Fire)	N/A	1964	Los Angeles	3/16/64	Not declared			$2,000,000
Flood	Storms	N/A	1964	Los Angeles	4/3/64	Not declared			1,610,300
Civil Unrest	Riots	N/A	1965	Los Angeles	8/14/65	Not declared	32	874	$44,991,000
Flood, Landslide	Flooding and Hill Slides Caused by Heavy Rains	N/A	1965	City of Burbank, Los Angeles	1/5/65	Not declared			Not Available
Landslide	Slide Damage	N/A	1965	City of Los Angeles	6/21/65	Not declared			$6,488,600
Fire	Major and Widespread Fires	N/A	1967	Los Angeles, Orange, San Diego, Ventura	1/7/67	Not declared			$11,345,000
HazMat	Major Oil Spill	N/A	1969	Coastal Areas of Southern California		Not declared			Not available
Flood	1969 Storms	Unknown	1969	Los Angeles, San Luis Obispo, Fresno, Inyo,	1/23/69, 1/25,69,	1/26/69	47	161	$300,000,000

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
				Riverside, San Bernardino, Santa Barbara, Tulare, Ventura, Amador, El Dorado, Kern, Kings, Madera, Modoc, Mono, Monterey, Orange, Placer, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Tuolumne, Mariposa, Merced, Calaveras, San Benito, Sierra, Contra Costa, Humboldt, Mendocino, Sonoma, Plumas, Tehama, Yuba, Butte, Marin, Yolo	1/28/69, 1/29/69, 2/8/69, 2/10/69, 2/16/69, 3/12/69				
Landslide	Slide Damage Caused by Heavy Rains and Storms	N/A	1970	City of Los Angeles	3/10/70	Not declared			$8,500,000
Fire	Statewide Fires		1970	City of Oakland, Los Angeles, Ventura, San Diego, Kern, San Bernardino, Monterey, Riverside	9/24/70, 9/28/70, 10/1/70, 10/2/70, 10/20/70, 11/14/70	9/29/70	19		$223,611,000
Earthquake	San Fernando Earthquake	DR-299	1971	Los Angeles	2/9/71	2/9/71	58	2,000	$483,957,000
Agricultural	Exotic Newcastle Disease Epidemic	N/A	1972	Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura, Santa Barbara	4/10/72, 5/22/72	Not declared			$10,000,000
Fire	Fires	N/A	1973	Los Angeles	7/16/73	Not declared			$1,300,000
Economic	Gasoline Purchasing Problems	N/A	1974	Alameda, Contra Costa, Los Angeles, Orange, Riverside, San Mateo, Solano, Santa Clara, Ventura	2/28/74, 3/4/74, 3/10/74	Not declared			
Fire	Fires	N/A	1975	Los Angeles	11/24/75	Not declared			$19,486,960
Drought	Drought	N/A	1976	Alpine, Calaveras, Colusa, Fresno, Glenn, Madera, Merced, San Diego, San Joaquin, Solano, Stanislaus, Sutter, Tuolumne, Alameda, Butte, Contra Costa, Kings, Los Angeles, Riverside, San Luis Obispo, Tulare, Yolo, Amador, Monterey, Napa, Nevada, San Benito, San Bernardino, Tehama, San Mateo, Marin	2/9/76, 2/13,76, 2/24/76, 3/26/76, 7/6/76	Not declared			$2,664,000,000
Fire	1978 Los Angeles Fire	EM-3067	1978	Los Angeles	10/24/78	10/29/78	1		$61,279,374
Severe Storm	Storms	Unknown	1978	Inyo, Mono, San Diego, San Luis Obispo, Kings, Monterey, Kern, Los	3/9/78, 2/27,78, 2/13/78	2/15/78	14	21	$117,802,785

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
				Angeles, Orange, Riverside, San Bernardino, Santa Barbara, Tulare, Ventura					
Economic	Gasoline Shortage Emergency	N/A	1979	Alameda, Contra Costa, Los Angeles, Marin, Monterey, Orange, Riverside, San Francisco, San Diego, Santa Clara, Santa Cruz, San Mateo, Ventura, San Bernardino, Sonoma, Contra Costa, Los Angeles, Orange, Santa Clara	5/8/79 - 11/13/79	Not declared			
Fire	Fires	N/A	1979	Santa Barbara, Ventura, Los Angeles, El Dorado	9/28/79, 9/21/79, 9/20/79	Not declared			$9,970,119
Flood	1980 Winter Storms	DR-615	1980	Santa Barbara, Los Angeles, Orange, Riverside, Ventura, San Bernardino, San Diego	2/21/80, 2/7/80	2/21/80			
Fire	Southern California Fires	DR-635	1980	San Bernardino, Los Angeles, Orange, Riverside	11/18/80	11/18/80			$64,795,200
Economic	Mediterranean Fruit Fly Infestation	N/A	1981	Contra Costa, Los Angeles, San Benito, Stanislaus, Santa Cruz, San Mateo	8/8/81 - 9/25/81	Not declared			$22,000,000
Flood, Severe Storm	1982-83 Winter Storms	DR-677	1982	Contra Costa, San Joaquin, Sacramento, Marin, San Mateo, Los Angeles, San Diego, Alameda, Orange, San Benito, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sonoma, Ventura, Trinity, Colusa, Lake, Mendocino, Monterey, San Luis Obispo, Solano, Yolo, Butte, Glenn, Kern, Kings, San Bernardino, Sutter, Tehama, Merced, Del Norte, Fresno, Madera, Napa, Placer, Riverside, Stanislaus, Tulare, Humboldt, Mariposa, Nevada, Yuba	1982, 1983	2/9/83	0	0	$523,617,032
Fire	Dayton Hills Fire	N/A	1982	Los Angeles, Orange, Ventura	10/10/82	Not declared	0		$19,277,102
Flood	Winter Storms	Unknown	1982	Contra Costa, San Joaquin, Sacramento, Marin, San Mateo, Los Angeles, San Diego,	12/8/82-3/21/83	2/9/83			$523,617,032

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
				Alameda, orange, San Benito, Santa Barbara, Santa Clara, Santa Cruz, Shasta, Sonoma, Ventura, Trinity, Colusa, Lake Mendocino, Monterey, San Luis Obispo, Solano, Yolo, Butte, Glenn, Kern, Kings, San Bernardino, Sutter, Tehama, Merced, Del Norte, Fresno, Madera, Napa, Placer, Riverside, Stanislaus, Tulare, Humboldt, Mariposa, Nevada, Yuba					
Economic	Mexican Fruit Fly	N/A	1983	Los Angeles	11/4/83	Not declared			
Fire	Statewide Fires	DR-739	1985	San Diego, City of Los Angeles, San Luis Obispo, Monterey, Santa Clara, Santa Cruz, Ventura	7/1/85 - 7/11/85	4/25/84	3	470	$64,845,864
Earthquake	Whittier Earthquake	DR-799	1987	Monterey park, City of Whittier, Los Angeles, Orange	10/2/87 - 10/5/87	10/7/87	9	200	$358,052,144
Economic	Mediterranean Fruit Fly	N/A	1987	Los Angeles	8/25/87	Not declared			
Severe Storm	Coastal Storms	DR-812	1988	Los Angeles, Orange, San Diego	1/21/88	2/5/88	0		
Economic	Mediterranean Fruit Fly	N/A	1988	Los Angeles	7/21/88	Not declared			
Fire, Windstorm	Fires/ High Winds	N/A	1988	Los Angeles	12/9/88	Not declared	0	2	$12,400,000
Economic	Mediterranean Fruit Fly	N/A	1989	Los Angeles	8/9/89	Not declared			
Fire	Santa Barbara Fires	DR-872	1990	Los Angeles, Santa Barbara, Riverside, San Bernardino	6/28/90, 6/29/90	6/30/90	3	89	$300,000,000
Freeze	Freeze	DR-894	1990	Santa Cruz, Fresno, Glenn, imperial, Kern, Mendocino, Monterey, Riverside, San Benito, San Bernardino, San Diego, San Mateo, Santa Barbara, Santa Clara, Solano, Sonoma, Tulare, Ventura, Alameda, Butte, Colusa, Los Angeles, Madera, Marin, Merced, Napa, San Joaquin, San Luis Obispo, Sutter, Yolo, Yuba, Stanislaus, Tehama	12/19/90-1/18/91	2/11/91			$856,329,675
Earthquake	Upland Earthquake	N/A	1990	Los Angeles, San Bernardino	3/9/90, 3/13/90	Not declared	0	38	$12,034,150
Economic	Mexican Fruit Fly	N/A	1990	Los Angeles, San Diego	5/14/90	Not declared			
Severe Storm	1992 Winter Storms	DR-935	1992	Los Angeles, Ventura, City of Los Angeles, kern, orange, San Bernardino	2/12/92, 2/19/92	2/25/92	5		$123,240,531
Civil Unrest	Los Angeles Civil Disorder	DR-942	1992	Los Angeles	4/29/92	5/22/92	53	2,383	$800,000,000

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
Flood	1992 Late Winter Storms	DR-979	1992	Alpine, Los Angeles, Humboldt, Napa, Santa Barbara, Culver City, City of Los Angeles, Contra Costa, Mendocino, Sonoma, Fresno, imperial, Madera, Monterey, San Bernardino, Sierra, Tehama, Trinity, Tulare, Modoc, Orange, Riverside, Lassen, Siskiyou, Plumas, San Diego	1/7/93 - 2/19/93	1/15/93	20	10	$600,000,000
Fire	Southern California Firestorms	DR-1005	1993	Los Angeles, Ventura, San Diego, Orange, Riverside, San Bernardino	10/27/93, 10/28/93	10/28/93	4	162	$1,000,000,000
Earthquake	Northridge Earthquake	DR-1008	1994	Los Angeles, Ventura, Orange	1/17/94, 1/24/94	1/17/94	57	11,846	$40,000,000,000
Severe Storm	Severe Winter Storms	DR-1044	1995	Los Angeles, Orange, Humboldt, Lake , Sonoma, Butte, Colusa, Contra Costa, Del Norte, Glenn, Kern, Lassen, Mendocino, Modoc, Monterey, Napa, placer, Plumas, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz, Tehama, Ventura, Yolo, Yuba, Alpine, Amador, Nevada, Riverside, Sacramento, San Bernardino, San Mateo, Shasta, Sutter, Trinity, San Diego, Alameda, Marin, Fresno, Kings, El Dorado, Madera, Solano, Siskiyou	1/6/95 - 3/14/95	1/13/95	11		$741,400,000
Storm, Flood	Late Winter Storms	DR-1046	1995	All counties except Del Norte		1/10/95	17		$1,100,000,000
Fire	Southern California Firestorms	EM-3120	1996	Los Angeles, Orange, San Diego	10/1/96			5	$40,000,000
Flood	El Nino		1998	Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, Fresno, Glenn Humboldt, Kern, Kings, Lake, Los Angeles, Marin, Mendocino, Merced, Monterey, Napa, Orange,			17		$550,000,000

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
				Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Siskiyou, Solano, Sonoma, Stanislaus, Sutter, Tehama, Trinity, Tulare, Ventura, Yolo, Yuba					
Fire	Fire		1999	Various Counties	8/26/99				
Fire	California Wildfires	DR-1498	2003	Ventura, Los Angeles, San Bernardino, Riverside, San Diego		DR1498			
Earthquake	Sierra Madre Earthquake	N/A	2003	Los Angeles	7/5/91	Not declared	1	30	$33,500,000
Fire	Southern California Wildfires	DR-1498	2003	Ventura, Los Angeles, San Bernardino, Riverside, San Diego	10/24-26/03	10/27/03			

State of California Governor's Office of Emergency Services

Natural Hazards (Listed in alphabetical order)

Biological & Human Disease

Biological/Health Emergencies were rated a Moderate PRIORITY HAZARD by the City of Paramount.

Impact: The City of Paramount has limited medical capabilities and depends on outside jurisdictions for medical expertise or Los Angeles County Department of Health. It recognizes their responsibility to their citizens and visiting population. If a disaster occurred within their boundaries they would work with the outside agencies to provide emergency care and response to the population.

Los Angeles County has experienced numerous disasters, varying in type and severity. Disasters often result in the need for health and human services as part of the immediate and long-term recovery period. Some disasters are localized with service needs focused in a single location; other disasters, such as earthquakes and civil unrest, result in geographically widespread health and human services needs.

It is essential following a disaster to identify locations where large numbers of people are gathered in open areas. These areas will require evaluation in order to assess health and human service needs. The recovery period may be shortened if health, mental health, and housing problems can be addressed quickly.

This plan is primarily directed to Los Angeles County Departments that will provide the initial team members. Other key human service providers, public and private, will be added to the teams to meet the growing needs of disaster victims.

Mission statements of the following Departments all relate to health and human services; they are annotated below:

Department of Health Services:

"...To protect, maintain, and improve the health of the community."

Community Health Services:

"... To provide population based public health services and public health clinics in order to assure healthy communities in Los Angeles County through the services of Public Health Nurses, Public Health Investigators, and others."

Environmental Health Services:

"... To protect health, prevent disease, and promote health for all persons in Los Angeles County through the management of potentially harmful chemical, physical, or biological agents in the environment."

Department of Mental Health:

The Department of Mental Health (DMH) will coordinate and provide mental health services to community disaster victims and disaster workers throughout the entire duration of the disaster and its recovery period. DMH will augment the Department of Health Services by providing disaster mental health services.

Department of Public Social Services:

The Department of Pubic Social Services (DPSS) is responsible, in partnership with the American Red Cross, to ensure that residents receive appropriate emergency shelter. DPSS is the County's liaison with Emergency Network Los Angeles/LA Voluntary Agencies Active in Disaster (ENLA/LAVOAD). In a disaster, DPSS will communicate community needs to this agency.

Influenza (Flu)

Epidemics of influenza typically occur during the winter months and have been responsible for an average of approximately 36,000 deaths/year in the United States during 1990–1999. Influenza viruses also can cause pandemics, during which rates of illness and death from influenza-related complications can increase dramatically worldwide. Influenza viruses cause disease among all age groups. Rates of infection are highest among children, but rates of serious illness and death are highest among persons aged $\geq$ 65 years and persons of any age who have medical conditions that place them at increased risk for complications from influenza.

Influenza vaccination is the primary method for preventing influenza and its severe complications. In this report from the Advisory Committee on Immunization Practices (ACIP), the primary target groups recommended for annual vaccination are 1) groups that are at increased risk for influenza-related complications (e.g., persons aged $\geq$ 65 years and persons of any age with certain chronic medical conditions); 2) the group aged 50–64 years because this group has an elevated prevalence of certain chronic medical conditions; and 3) persons who live with or care for persons at high risk (e.g., health-care workers and household contacts who have frequent contact with persons at high risk and who can transmit influenza to persons at high risk). Vaccination is associated with reductions in influenza-related respiratory illness and physician visits among all age groups, hospitalization and death among persons at high risk, otitis media among children, and work absenteeism among adults. Although influenza vaccination levels increased substantially during the 1990s, further improvements in vaccine coverage levels are needed, chiefly among persons aged <65 years who are at increased risk for influenza-related complications among all racial and ethnic groups and among blacks and Hispanics aged $\geq$ 65 years. ACIP recommends using strategies to improve vaccination levels, including using reminder/recall systems and standing orders programs. Although influenza vaccination remains the cornerstone for the control and treatment of influenza, information is also presented regarding antiviral medications, because these agents are an adjunct to vaccine.

Biology of Influenza

Influenza A and B are the two types of influenza viruses that cause epidemic human disease. Influenza A viruses are further categorized into subtypes on the basis of two surface antigens: hemagglutinin (H) and neuraminidase (N). Influenza B viruses are not categorized into subtypes. Since 1977, influenza A (H1N1) viruses, influenza A (H3N2) viruses, and influenza B viruses have been in global circulation. In 2001, influenza A (H1N2) viruses that probably emerged after genetic re-assortment between human A (H3N2) and A (H1N1) viruses began circulating widely. Both influenza A and B viruses are further separated into groups on the basis of antigenic characteristics. New influenza virus variants result from frequent antigenic change (i.e., antigenic drift) resulting from point mutations that occur during viral replication. Influenza B viruses undergo antigenic drift less rapidly than influenza A viruses.

A person's immunity to the surface antigens, including hemagglutinin, reduces the likelihood of infection and severity of disease if infection occurs. Antibody against one influenza virus type or subtype confers limited or no protection against another. Furthermore, antibody to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent

development of antigenic variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the usual incorporation of ≥ 1 new strains in each year's influenza vaccine.

Influenza Epidemic

The influenza (flu) epidemics that happen nearly every year are important events. Influenza is a respiratory illness that makes hundreds of thousands of people sick each year. The illness can cause severe health problems for the elderly and younger people with diseases, such as diabetes, heart or lung disease, and illness that can weaken the immune system. Typical primary influenza illness lasts about a week and is characterized by abrupt onset of fever, muscle aches, sore throat, and nonproductive cough. In some persons, severe malaise and cough can persist for several days or weeks.

Influenza infection not only causes primary illness but also can lead to severe secondary medical complications, including influenza viral pneumonia, secondary bacterial pneumonia, worsening of underlying medical conditions, such as congestive heart failure, asthma, or diabetes, or other complications such as ear infections (i.e., otitis media) in children.

Elderly persons (i.e., those 65 years and over) and persons with certain underlying medical conditions, such as chronic heart or lung disease, are at increased risk for developing complications from influenza infection. These complications increase the risk for hospitalization or death.

One of the most important features about influenza viruses is that their structure changes slightly but frequently over time (a process known as “drift”), and that this process results in the appearance of different strains that circulate each year. The composition of the flu vaccine is changed each year to help protect people from the strains of influenza virus that are expected to be the most common ones circulating during the coming flu season.

The ability of the vaccine to protect against influenza during a particular season depends on several factors, but particularly 1) the match between influenza strains in the vaccine and strains circulating in the community, and 2) the ability of each person's immune system to mount a protective response as a result of the vaccination. Although the vaccine may not prevent everyone who takes it from getting sick, it does reduce the risk of severe illness, hospitalization, and death. That's why it is so important for anyone who wants to reduce his or her risk of getting severely ill from influenza to receive the vaccine each year.

Influenza Pandemic

By contrast to the more gradual process of drift, in some years, the influenza virus changes dramatically and unexpectedly through a process known as “shift.” Shift results in the appearance of a new influenza virus to which few (if any) people are immune. If this new virus spreads easily from person to person, it could quickly travel around the world and cause increased levels of serious illness and death, affecting millions of people. **This is called an influenza pandemic.**

Fortunately, pandemics don't occur very often. There has not been an influenza pandemic since 1968. In 1997, however, a flu virus, that had previously infected only birds, caused an outbreak of illness in humans. This virus, known as the “avian flu,” resulted in 18 illnesses and six deaths in Hong Kong but did not easily spread from person to person. Still, it provided a frightening reminder that the next pandemic could occur at any time. Governments around the world took notice. The U.S. government worked with State and local governments, and private-sector partners, to develop strategies and programs that would prepare our country for a pandemic.

Influenza Pandemic Start

There are three main types of influenza viruses: A, B, and C. Influenza C causes only mild disease and has not been associated with widespread outbreaks. Influenza types A and B, however, cause epidemics nearly every year. Influenza A viruses are divided into subtypes, based on differences in two surface proteins: hemagglutinin (H) and neuraminidase (N). Influenza B viruses are not divided into subtypes. During an influenza flu season, usually one or more influenza A subtype and B viruses circulate at the same time.

A pandemic is possible when an influenza A virus makes a dramatic change (i.e., "shift") and acquires a new H or H+N. This shift results in a new or "novel" virus to which the general population has no immunity. The appearance of a novel virus is the first step toward a pandemic. However, the novel influenza A virus also must spread easily from person to person (and cause serious disease) for a pandemic to occur. Influenza B viruses do not undergo shift and do not cause influenza pandemics.

The reservoir for Type A influenza viruses is wild birds, but influenza A viruses also infect animals such as pigs and horses, as well as people. The last two pandemic viruses were combinations of bird and human influenza viruses. Many persons believe that these new viruses emerged when an intermediate host, such as a pig, was infected by both human and bird influenza A viruses at the same time. A new virus was created. Events in Hong Kong in 1997, however, showed that this is not the only way that humans can become infected with a novel virus. Sometimes, an avian influenza virus can "jump the species barrier" and move directly from chickens to humans and cause disease.

Since, by definition, a novel virus is a virus that has never previously infected humans, or hasn't infected humans for a long time, it's likely that almost no one will have immunity, or antibody to protect them against the novel virus. Therefore, anyone exposed to the virus--young or old, healthy or weak--could become infected and get sick. If the novel virus is related to a virus that circulated long ago, older people might have some level of immunity. It is possible that the novel virus may be especially dangerous to some age groups that are not usually at risk of severe illness or death from annual influenza (such as healthy young adults). Such widespread vulnerability makes a pandemic possible and allows it to have potentially devastating impact.

Influenza Pandemic Impact

There's no simple answer to the question of how serious a pandemic might be. It all depends on how virulent (severe) the virus is, how rapidly it can spread from population to population, and the effectiveness of pandemic prevention and response efforts. The 1918 Spanish flu is an example of a worst-case scenario because the strain was highly contagious and quite deadly. This pandemic killed more Americans than all the wars of the 20th century. Since our world today is vastly more populated, and people travel the globe with ease, the spread of a next pandemic could be more rapid than that of previous pandemics.

The impact of a pandemic isn't measured only by how many people will die. If millions of people get sick at the same time, major social consequences will occur. If many doctors and nurses become ill, it will be difficult to care for the sick. If the majority of a local police force is infected, the safety of the community might be at risk. If air traffic controllers are all sick at once, air travel could grind to a halt, interrupting not only business and personal travel, but also the transport of life-saving vaccines or anti-viral drugs. Therefore, a vital part of pandemic planning is the development of strategies and tactics to address all these potential problems.

Drought

Drought was rated a LOW RISK PRIORITY in the City of Paramount

Impact; Drought represents little to no hazard to the City of Paramount.

Unlike weather forecasting, Climatologists deal with years. One 6 inch rainstorm out of nowhere could make this predictions for this year look foolish in your area. Therefore you will have drought forecasts tempered with, "indications are" "likely" and "overdue".

Definition of Drought

There are four different ways that drought can be defined: Meteorological - a measure of departure of precipitation from normal. Due to climatic differences what is considered a drought in one location may not be a drought in another location. Agricultural - refers to a situation when the amount of moisture in the soil no longer meets the needs of a particular crop. Hydrological - occurs when surface and subsurface water supplies are below normal. Socioeconomic - refers to the situation that occurs when physical water shortage begins to affect people.

Agricultural Definition of Drought

Drought is a protracted period of deficient precipitation resulting in extensive damage to crops, resulting in loss of yield.

Lack of rainfall for an extended period of time can bring farmers and major metropolitan areas to their knees. It does not take very long; a few rain-free weeks spreads panic and shrivels crops. We are told to stop washing our cars, cease watering the grass and take other weather conservation steps. Continued sunshine without sufficient rain can turn a rain forest into a desert; so maybe sunny weather is not always the best weather.

The Dust Bowl days of the 1930's affected 50,000,000 acres of land, rendering the farmers helpless. In the 1950's the Great Plains suffered a severe water shortage when seven years went by with rainfall well below normal. Crop yields failed, the water supply fell.

Deficient Topsoil Moisture

A good definition of agricultural drought should be able to account for the variable susceptibility of crops during different stages of crop development, from emergence to maturity. deficient topsoil moisture at planting may hinder germination, leading to low plant populations per hectare and a reduction of final yield. However, if topsoil moisture is sufficient for early growth requirements, deficiencies in subsoil moisture at this early stage may not affect final yield if subsoil moisture is replenished as the growing season progresses or if rainfall meets plant water needs.

Concept of Drought

Drought is an insidious hazard of nature. Although it has scores of definitions, it originates from a deficiency of precipitation over an extended period of time, usually a season or more.

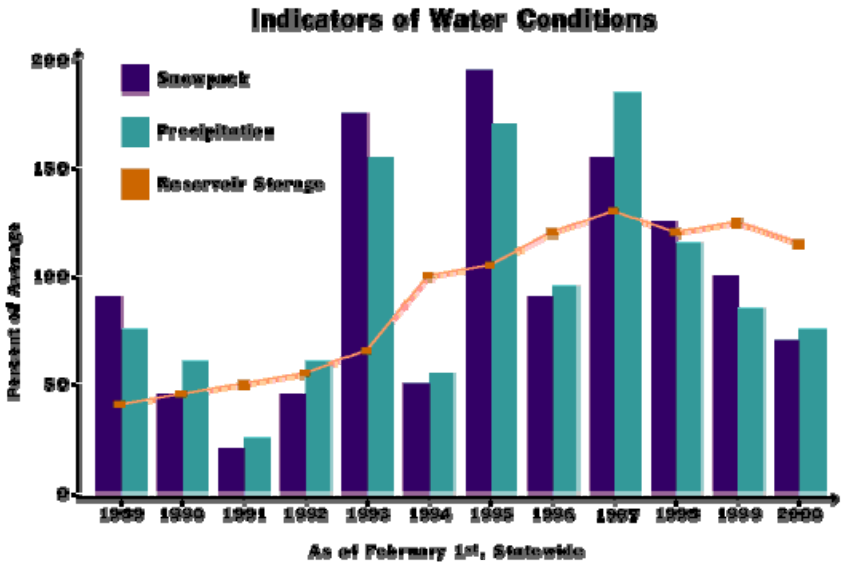
This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be considered relative to some long-term average condition of balance

between precipitation and evapo-transpiration (i.e., evaporation + transpiration) in a particular area, a condition often perceived as "normal". It is also related to the timing (i.e., principal season of occurrence, delays in the start of the rainy season, occurrence of rains in relation to principal crop growth stages) and the effectiveness of the rains (i.e., rainfall intensity, number of rainfall events). Other climatic factors such as thigh temperature, high wind, and low relative humidity are often associated with it in many regions of the world and can significantly aggravate its severity. Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this "natural" hazard.

A five-year drought has parched soils, lowered reservoirs and weakened forests. And if the past is any guide, the dry spell could go on for decades.

One dry year does not normally constitute a drought in California, but serves as a reminder of the need to plan for droughts. California's extensive system of water supply infrastructure -- its reservoirs, groundwater basins, and inter-regional conveyance facilities -- mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

The graphic below illustrates several indicators commonly used to evaluate California water conditions. The percent of average values are determined for measurement sites and reservoirs in each of the State's ten major hydrologic regions. Snow pack is an important indicator of runoff from Sierra Nevada watersheds, the source of much of California's developed water supply.



Earthquake

Earthquake was rated a HIGH PRIORITY HAZARD in the City of Paramount

Impact: Depending on the size and duration of a seismic event, the City of Paramount could suffer from minor to catastrophic damage. The damage to their infrastructure and highways could limit their ability to respond and/or recovery.

The estimated potential damage to all buildings is approximately less than 10% using past and current best statistical data available from federal, state, and expert agencies.

Major Earthquake

General Situation

The City of Paramount is in the vicinity of several known active and potentially active earthquake faults including the San Andreas, the San Jacinto, Whittier-Elsinore, and the Newport-Inglewood.. 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 material/chemical accidents and possible failure of the waterways and dams. The time of day and season of the year would have a profound effect on the number of dead and injured and the amount of property damage sustained. Such an earthquake would be catastrophic in its affect upon the population and could exceed the response capabilities of the individual cities, Los Angeles County Operational Area and the State of California Emergency Services. Damage control and disaster relief support would be required from other local governmental and private organizations, and from the state and federal governments.

Extensive search and rescue operations would be required to assist trapped or injured persons. Emergency medical care, food and temporary shelter could be required by injured or displaced persons. Identification and burial of many dead persons 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 Paramount 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.

Issue - Seismic Safety

The major natural hazard that will face the City and region in the coming years is related to the numerous earthquake faults that criss-cross the Southern California region. The following policies underscore the City's recognition of these hazards.

The Seismic safety Element identifies seismic hazards in the city and policies for reducing damage to life and property in the event of an earthquake.

Background

Considerations in estimating risk of damage from seismic activity include the following:

a. Geotechnical Setting – Essentially the same as the entire Los Angeles Basin;

b. Subsurface Soil Conditions – moderate to high soil strength characteristics with some expansiveness;

c. Local Faulting – No known faults: the closest is the Newport-Inglewood some 4 miles or more distant;

d. Regional Sesmicity – Primarily related to the Newport-Inglewood and San Andreas Faults. Paramount is in Seismic Zone 2 in terms of probable damage from regional seismic activity, meaning a moderate groundshaking response to fault activity:

e. Groundwater and Related Factors – A general but very slow lowering of the ground water table with little if any indication of subsidence to date;

f. Liquefaction Potential – Generally a low potential except for a section in the southerly portion of the City;

g. Settlement and Subsidence – No apparent problem, but should be monitored if the water table continues to decline;

h. Seismic Risk – The major consideration is avoiding uses and structures particularly vulnerable to damage from seismic activity, such as:

- High Occupancy uses.
- Large scale structures
- Vital uses (e.g., hospitals, fire, police, major transportation, major utilities).

- Uses with dependent or disabled populations.
- Uses which are susceptible to secondary effects from seismic activity (explosions, etc.).
- Uses inside structures which are Pre-Field Act or structurally unsound.

- *Health and Safety Policy 7.* Prevent serious injury and loss of life.

- *Health and Safety Policy 8.* Prevent serious structural damage to critical facilities and structures, particularly where large numbers of people are apt to congregate at one time.

- *Health and Safety Policy 9.* Insure the continuity of vital services and functions.

- *Health and Safety Policy 10.* Educate the community on how the resident and business person can minimize seismic risk by adequate knowledge and preparation.

- *Health and Safety Policy 11.* Develop an information program to familiarize citizens with seismic risk and to develop seismic awareness.

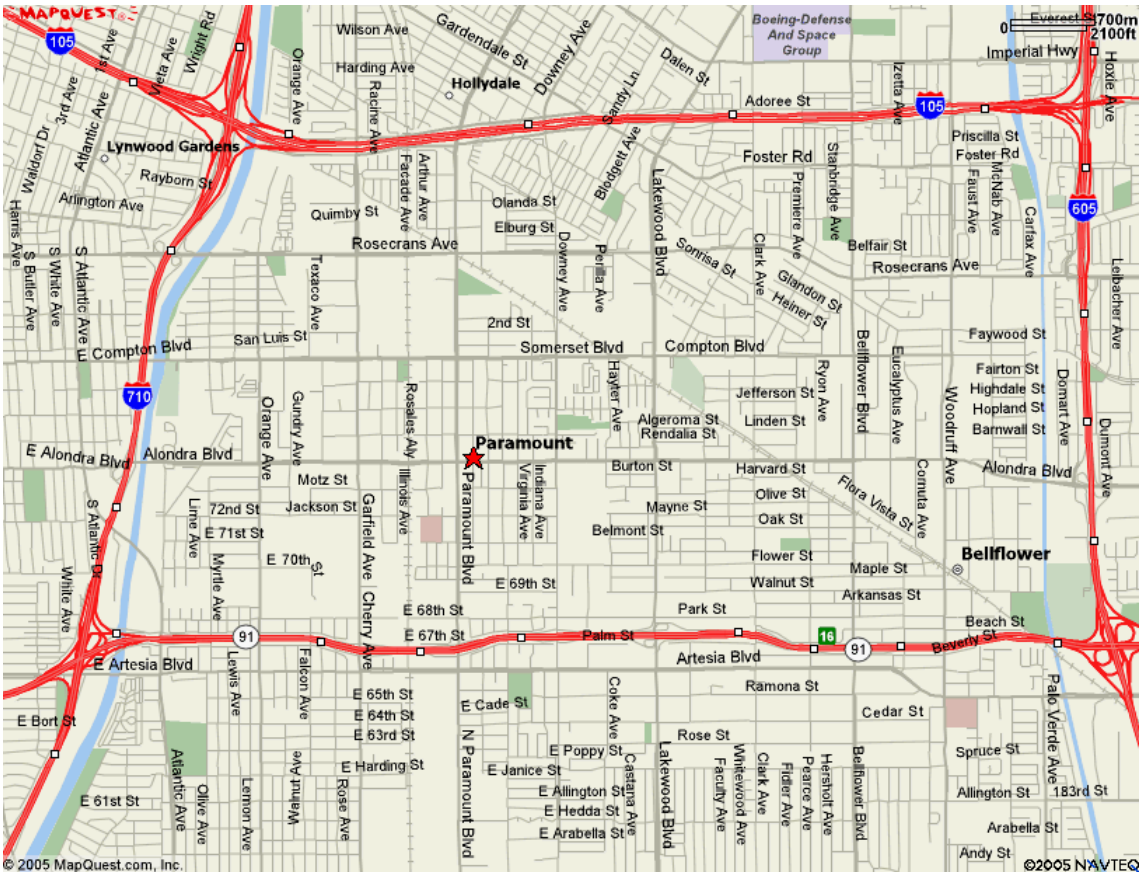
- *Health and Safety Policy 12.* Require special soils and structural investigations for all proposed structures of large scale or involving large groups of people.

- *Health and Safety Policy 13.* Continue the code enforcement program, including identification of pre-1933 structures of large scale or occupied by large numbers of people, and require correction or demolition of structures found to be dangerous.

- *Health and Safety Policy 14.* Require a soils analysis for large projects, particularly south of Alondra Boulevard.

- *Health and Safety Policy 15.* Continue an active redevelopment program, particularly in older commercial and industrial areas.

City of Paramount



Specific Situation

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

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.

Historic Earthquakes

Since seismologists started recording and measuring earthquakes, there have been tens of thousands of recorded earthquakes in Southern California, most with a magnitude below three. No community in Southern California is beyond the reach of a damaging earthquake. The table below describes the historical earthquake events that have affected Southern California.

About 30 earthquakes occur every day in Southern California. Most have a magnitude of less than 2.0. No evidence exists that earthquakes are more likely to occur in certain kinds of weather.

The best place to see any part of the monstrous, 800-mile San Andreas Fault is in Palmdale in a road cut along the Antelope Valley Freeway (Route 14) just north of Avenue S. The last time this part of the fault was active was in 1857

Table of Historic Earthquakes

Year	Date	Location	Time	Richter	Mercalli	Deaths & Property Damage
1769	Jul 28	L.A. Area	---	6.0	VIII	No information
1812	Dec 8	L.A. Area	3:00pm	7.0	VII	40 deaths, Mission San Juan Capistrano severely to moderately damaged. Mission San Gabriel moderately damaged.
1827	Sep 24	L.A. Area	4:00am	5.5	---	**No information**
1855	Jul 11	L.A. Area	4:15am	6.0	VIII	Bells of Mission San Gabriel torn down. 26 buildings damaged in L.A.
1857	Jan 9	Fort Tejon	4:24pm	7.9	IX	2 deaths; Heavy property damage and loss
1916	Oct 23	Tejon Pass Region	**2:44pm**	**5.3**	**---**	**No information**
1933	Mar 10	Long Beach	5:54pm	6.4	IX	120 deaths; $50 million
1941	Oct 21	Torrance-Gardena	10:57pm	4.8	VII	No deaths; $100,000
1941	Nov 14	Torrance-Gardena	12:42am	4.8	VIII	No deaths; $1 million
1951	Dec 25	San Clemente Island	4:46pm	5.9	---	**No deaths; No appreciable damage**
1971	Feb 9	San Fernando	6:01am	6.6	---	65 deaths; $505 million
1979	Jan 1	Malibu	3:15pm	5.2	---	No deaths; minor damage
1987	Oct 1	Whittier-Narrows	7:42am	5.9	---	8 deaths; $358 million
1988	Dec 3	Pasadena	11:38pm	5.0	---	No deaths; No appreciable damage
1989	Jan 19	Malibu	10:38pm	5.0	---	No deaths; slight damage
1989	Jun 12	Montebello	9:57am	4.6	---	No deaths; No appreciable damage
1991	Jun 28	Sierra Madre	7:44am	5.8	---	2 deaths; $40 million
1994	Jan 17	Northridge	4:31am	6.7	---	61 deaths Est. $20 billion
2001	Sep 9	SE of West Hollywood	4:59pm	4.2	---	No deaths; moderate damage

The Los Angeles-Whittier Narrows Earthquake of October 1, 1987 (FEMA-799-DR-CA).

On October 7, 1987, the President declared California a major disaster area as a result of an earthquake which struck the eastern Los Angeles Metropolitan area. Los Angeles County was declared eligible for the Individual and Public Assistance Programs. What follows is a summary of the Hazard Mitigation Survey Team's recommendations to the Federal Emergency Management Agency (FEMA) Regional Director, the Governor's Authorized Representative, and interested Federal, State, and local agencies.

Overview

The relatively moderate earthquake that struck the eastern Los Angeles area at 7:42 a.m. on October 1 produced widespread damage in southern California. The earthquake caused relatively few deaths and injuries but produced significant financial impacts, both from damage and loss of revenues.

Damage due to earthquake shaking was reported as far north as Ventura County and extended south to mid-Orange County, west to Long Beach, and east to Ontario. At least 55 cities as well as unincorporated areas in Los Angeles, Orange, and Ventura counties reported some degree of damage, and total losses exceeded $350 million (see Tables 1 and 2 for detailed estimates of losses). The primary concentration of major damage was to the redeveloped historic central business district of Whittier. Numerous buildings occupied primarily by small businesses suffered severe damages.

Fatalities caused by the earthquake included a student at California State University, Los Angeles, killed by a concrete slab falling from a parking structure, a utility worker trapped while excavating for a power line in the Angeles National Forest area, and a Maywood man who fell to his death from a second story apartment window. Approximately 200 injuries (mostly minor) and several fatal heart attacks were also attributed to the earthquake.

FEMA and the State of California opened ten disaster application centers. By November 13, 1987, 22,622 individuals and businesses had registered at these centers. The temporary housing program received 15,579 applications for assistance, while the Individual Family Grant Program received 4,609 applications. The Small Business Administration issued 13,877 home and personal property loan applications and 4,200 business loan applications.

Public schools generally experienced few casualties or major damage. The Los Angeles Unified School District reported that 56 schools sustained minor damage and two schools sustained major damage, with an estimated loss of $5 million. The most significant problem appeared to be emergency coordination and implementation of school disaster plans.

The earthquake damaged more than 30 hospitals, nursing homes, medical care and outpatient facilities as far away as 30 miles from the epicenter. Businesses experienced significant financial disruption. Several large corporations reported structural and nonstructural damage, resulting in significant losses. Numerous small businesses in Whittier experienced major losses and interruptions of business that in some cases were difficult to recover from.

Table 1

LOSSES (in $millions)			
	Los Angeles Co.	**Orange Co.**	**Total**
Private Sector	$244,080	$8,648	$252,728
Public Sector	104,909	413	105,322
TOTAL	***$348,989***	***$9,061***	***$358,050***

Table 2

PUBLIC SECTOR LOSSES BY CATEGORY (in $millions)	
Counties/Cities/Special Districts	$52,170
Community Colleges	1,747
State Facilities	23,625
Schools (K-12)	16,000
Private Non-Profit	11,780
TOTAL	***$105,322***

Geophysical Discussion

The Los Angeles-Whittier Narrows earthquake, measuring 5.9 on the Richter scale, occurred in the east Los Angeles metropolitan area at 7:42 a.m. on October 1, 1987. The earthquake's epicenter was approximately six miles south-southeast of Pasadena. The main shock occurred along a previously unidentified Transverse Range thrust fault. It was followed by approximately thirty-five aftershocks including one magnitude 5.3 event at 3:59 a.m. on October 4. Aftershocks continued through the end of the month.

The geophysical setting of this earthquake is described by the interaction between crustal plates that are in constant motion (5-10 cm/yr.) relative to one another. The San Andreas fault system forms the boundary between the Pacific and the North American plates. This boundary intersects several of California's major metropolitan centers, making it one of the most extensively urbanized tectonic plate boundaries.

The Los Angeles metropolitan area is susceptible to earthquake damage resulting from the ongoing tectonic process that characterizes coastal California. This process is dominated by the intersection of the San Andreas and the Transverse Range fault systems ; the effects of this intersection are evident in the regular occurrence of moderate size earthquakes.

The Los Angles metropolitan area, inhabited by more than 11 million people, is one of the key industrial, commercial, and cultural centers of the United States. As the area's population and development continue to expand, so does its vulnerability to damaging earthquakes. The 1971 San Fernando and the Whittier Narrows earthquakes, both moderate-sized events, demonstrate how vulnerable a complex modern urban society is to the damaging effects of earthquakes. Earthquakes of similar moderate magnitude can be expected to recur in the region on a regular basis. According to the U.S. Geological Survey, there is a strong possibility that the potential for moderate magnitude earthquakes within the Los Angeles Basin has been underestimated by seismologists and emergency planners.

Even though the losses from these and other moderate earthquakes are significant, they do not reflect the overall risk to the region, since none has been as strong as the largest credible earthquake, an 8.0+ magnitude event on the San Andreas Fault. The probability that such a large earthquake will occur sometime in the next 25 years near the Los Angeles metropolitan area is estimated to be 50 percent or greater. Projected losses would exceed those of any previous natural disaster in the United Stated.

Damage Assessment

Approximately 10,000 buildings in the region were damaged as a result of the October 1 earthquake, with additional damage occurring after the major October 4 aftershock. Structural damage impacted primarily unreinforced masonry commercial buildings, wood frame homes, apartments, and mobile homes, and concrete frame structures. Other areas of concern included nonstructural damage, transportation and lifelines.

Unreinforced Masonry Structures

The most heavily damaged structures were older commercial buildings constructed of unreinforced masonry. The business district of Whittier experienced heavy damage to these types of structures. Following the earthquake, the entire business district was closed, and a number of the damaged buildings were demolished. Typical damaged

consisted of failure of one or more load-bearing walls, with occasional collapse of floor or roof diaphragm elements.

The Unreinforced Masonry Building Act (SB 547), the state law passed in 1986 to require local jurisdictions to develop hazard mitigation programs for unreinforced masonry buildings, had not yet been fully implemented at the local level. The cities of Los Angeles and Monterey Park had enacted hazardous building ordinances, but had not yet fully implemented them. Other communities in the impacted area were considering enacting this type of ordinance.

Residential Structures

A second serious type of structural damage involved single family homes, apartment buildings, and mobile homes. In some cases, homes experienced damage to unreinforced masonry walls, especially hollow clay tile walls, a construction material popular in older southern California buildings. In most cases, however, residential damage was to wood frame structures. Typically the failure of the supporting "cripple wall" between the concrete foundation and the floor diaphragm caused the building to slide off the foundation, destroying exterior structural components and breaking utilities connections. Many homes sustained minor damage such as chimney collapse.

Un-reinforced masonry apartment buildings experienced significant damage, although none actually collapsed. Wood frames/stucco apartment buildings were less heavily impacted, but some sustained major cracking of exterior walls that in effect made the structure uninhabitable. Some damage occurred also to the more modern apartment and condominium structures, including wall cracks, fallen ceilings, and collapse of balconies.

Damage was also reported to mobile homes. Typically, this damage involved loss of support from foundation piers due to earthquake shaking.

Modern Concrete Frame Structures

Some modern concrete frame buildings experienced significant problems, while steel frame buildings performed well. Concrete frame parking structures experienced damage, in one case resulting in a fatality. Several concrete frame buildings on the campus of California State University, Los Angeles, sustained significant damage. Pre-cast concrete buildings proved particularly vulnerable to earthquake shaking, and would probably have experienced severe damage if the duration of the earthquake shaking had been slightly longer. A 1976 pre-cast concrete frame structure in Rosemead experienced serious structural damage which forced the corporate occupant to relocate its work force in temporary outdoor units.

Nonstructural Damage

Widespread nonstructural damage was reported following the earthquake. Many broken glass storefront windows could have resulted in severe injuries had the earthquake occurred one hour later when pedestrian traffic was present. Other nonstructural damage of serious concern included the widespread failure of elevators, the partial collapse of many ceilings and light fixtures, and the toppling of building contents.

Transportation & Lifelines

Damage to the transportation system was minimal. One exception was the Interstate 605 overpass at the intersection with Interstate 5, where damaged columns resulted in a one-day closure of both freeways at that location. Local roads and highways experienced little damage. Airports suffered enough damage to requir4e temporary closure, but were generally back in operation within a day.

The municipally owned water system in Whittier experienced major damage. Numerous water mains in the old system were cracked or broken. The October 4 aftershock exacerbated the damage in some of the same locations.

Emergency Response

The California Office of Emergency Services (OES) activated its Region I Emergency Operations Center (EOC) in Los Angeles and attempted to determine the level and location of earthquake damage. Region I staff, supplemented by staff from the State Department of Transportation, the State Department of Health Services, and the Southern California Earthquake Preparedness Project (SCEPP), also processed requests for volunteer assistance from the California Conservation Corp (CC) and the OES engineers program. At approximately 3:45 p.m. on October 1, the California Earthquake Prediction Evaluation Council (CEPEC) convened via a conference call from the EOC to ascertain, to the extent possible, the probability that the initial earthquake would be followed within the next several days by a shock of equal or greater magnitude. The consensus of the Council was that the likelihood of such an event was less than 5%.

Two of the cities most affected by the earthquake had exercised their emergency response plan during 1987. One of these, Monterey Park, had exercised its plan just two days prior to the earthquake. Whittier, the city most seriously damaged by the earthquake, had previous initiated a comprehensive community training program and reported that citizens and city employees knew what to do.

Evacuations

Numerous evacuations from high-rise and other types of buildings occurred after the earthquake. In most cases, these evacuations were spontaneous and unplanned, resulting in some inappropriate actions. For example, in some high-rise buildings, occupants congregated on sidewalks outside the building, risking injury from falling glass in the event of an aftershock.

In other cases, residents of apartment buildings self-evacuated to nearby parks, sometimes against the advice of emergency responders. Red Cross staff reported dealing with two kinds of problems following the earthquake: residents fearful of leaving shelters and returning to their homes, and landlords locking tenants out in order to obtain new tenants at higher rents.

Mutual Aid

Once the area and extent of damage became generally known, jurisdictions in need of mutual aid were called by jurisdictions willing to provide it. Among the resources made available were:

- The City of Los Angeles provided numerous building inspectors to Whittier;
- Huntington Park provided public works assistance to Bell;
- Los Angeles County provided building inspectors, aerial lift trucks, and haulage to Alhambra and building inspectors to Whittier;
- Orange County provided fire units to Monterey Park;
- Ventura and Orange counties dispatched fire equipment to Los Angeles County through regular fire mutual aid channels;
- The (CCC) provided crews to Alhambra and Whittier to assist in demolishing chimneys destroyed by the earthquake;
- State OES provided hand-held radios to Whittier.

Communications

The telephone communications system, as expected, experienced severe overload and consequent outage. Land-line communications were disrupted by the earthquake. In some cases, phones did work, but most jurisdictions hit hardest reported one-way communications, with calls coming in, but none going out. Although service was restored relatively quickly, the outage restricted the ability of local government to respond quickly to the emergency.

Jurisdictions with organized radio amateurs groups reported success in using these individuals to determine the initial extent of their damage. One city used cellular car phones for two-way communications; they functioned well although they are ultimately tied into the existing land line network.

In spite of the relatively minor incidence of injury produced by this earthquake, medical communications systems experienced an overload of the 911 system. Extra telephone dispatchers were called in to handle the greatly increased number of calls which, at one point, tied up virtually every 911 line.

It is clear from this response that a higher magnitude earthquake, with greater consequences, could completely overburden the emergency communications system.

Fires and Hazardous Materials

Fire departments around the area reported a number of calls concerning fires and hazardous materials incidents immediately following the earthquake. The Los Angeles City Fire Department reported five earthquake caused fires, three of which were linked to natural gas leaks.

A significant hazardous materials incident occurred in the City of Santa Fe Springs, when an earthquake-ruptured tank leaked 240 gallons of chlorine into the air, causing a plume cloud formation that drifted through the industrial section of the City toward Whittier, resulting in the evacuation of some areas. Spilled chemicals resulted in a fire at a laboratory facility of California State University, Los Angeles. Pockets of encapsulated asbestos were dislodged by the earthquake shaking, releasing airborne asbestos fibers into ventilation systems or some public schools.

The Southern California Gas Company received over 20,000 service calls following the earthquake. They found 4,065 gas leaks, of which only 1,411 proved to be directly caused by the earthquake. A total of 16,507 customers reported turned off their gas although there was no gas leak; 81 automatic gas shutoff valves had to be reset.

Mass Care

The American Red Cross sheltered 10,359 people in 21 shelters following the earthquake and fed disaster victims 186,635 meals. By November 18, 1987, the Red Cross had provided 20,930 "bed units" (one person per day per bed equals one bed unit). In addition, some 625 families had been placed in rental units and more than 593 individuals checked into motels. Some difficulties were reported in terms of developing coordination between volunteer organizations and local government in providing this service.

Initial Recovery

After the main shock, city and county authorities started to quickly clean up and open the damaged area to people who wanted to remove their business inventories, clean up debris, or get back to work. Vehicle traffic was kept out of the most seriously damaged areas, but allowed access to the immediately surrounding area. This initial recovery effort failed to account for potentially damaging aftershocks. Although the Whittier Narrows aftershock sequence was characterized by an unusually small number of aftershocks during its first 48 hours of activity, a very large aftershock, measuring 5.3 on the Richter scale, occurred on October 4. The Whittier May Company parking garage, which was damaged but stills standing after the earthquake, collapsed during the aftershock.

The Northridge Earthquake

The magnitude 6.7 Northridge earthquake occurred at 4:31 on the morning of January 17, 1994, a national holiday, when most Californians were at home asleep. Fifty-seven people lost their lives, nearly 9,000 were injured, and damage was in excess of $20 billion.

Responding to the losses from the Northridge earthquake, Governor Pete Wilson issued Executive Order W-78-94 instructing the Seismic Safety Commission to review the effects of the earthquake and to coordinate a study of the specific policy implications arising from the Northridge earthquake, with particular attention to seismic structural safety and land-use planning.

In carrying out the Governor's mandate, the Commission used over three dozen background reports (published separately in the *Compendium of Background Reports on the Northridge Earthquake*, SSC 94-08) that describe the relevant laws, codes, regulations, and current practices in the fields of land use planning, structure and lifeline design, construction, and earth sciences. These reports were prepared by experts who reviewed the legal, social, and physical environment in which they took place. The reports were also reviewed by over 60 stakeholders, from state agencies and professional organizations to private citizens. In addition, a number of detailed case studies were conducted on over two dozen buildings following the earthquake and published as *Northridge Buildings Case Studies*, SSC 94-06.

Effects of the Northridge Earthquake

At 4:31 a.m. on January 17, 1994, eight miles below the surface of the northwestern end of the San Fernando Valley, the magnitude 6.7 earthquake generated intense shaking that

caused widespread damage and enormous economic loss. The communities of Northridge, San Fernando, West Hollywood, Santa Clarita, Fillmore, Simi Valley, and Sherman Oaks were the hardest hit, but strong shaking and vulnerable buildings caused extensive damage as far away as central Los Angeles, Santa Monica, and Whittier.

This report is an overview of the effect of the Northridge earthquake on people, buildings, lifelines, and the local economy. It is these effects the Commission seeks to reduce in future earthquakes through improved public policy.

People

Although the number of lives lost in the Northridge earthquake was remarkably low considering the intensity of the earthquake and its location, 57 people died, nearly 9,000 were injured, and the earthquake affected the lives of more people than any previous natural disaster in the United States.

The earthquake hit California hardest at home. Over 25,000 dwelling units were permanently lost or severely damaged, and over 1,600 homes and apartment buildings were declared uninhabitable. By mid-September, the Governor's Office of Emergency Services and the Federal Emergency Management Agency (FEMA) had received over 630,000 phone calls regarding disaster assistance from victims of the earthquake, more than twice the number received after the previous record holder, Hurricane Andrew. FEMA had also received over 265,000 applications for individual and family grants. The Small Business Administration had conducted over 535,000 interviews with earthquake victims and had approved over 100,000 loans totaling nearly $3.4 billion.

Low-cost housing proved the most difficult to replace. Despite extraordinary city, state, and federal government efforts, repairs have begun on less than half of the 5,607 buildings that provided 11,000 apartments in the now infamous "ghost towns" (see Figure 3). The owners of the remaining buildings either don't yet know whether they can rebuild or have decided to forfeit their equity and allow lenders to foreclose.

Local mental health agencies and community-based groups reported over 1,150,000 crisis counseling interventions, costing over $35 million. Although most victims have adjusted and returned to an appearance of normalcy, for many the traumas continues.

Buildings

With losses estimated at $20 billion, the Northridge earthquake was the most expensive earthquake in the history of this country. The greatest portion of those losses was a direct result of the damage to buildings. Over 112,000 structures were damaged in the earthquake. In the City of Los Angeles, over 934,000 buildings were damaged badly enough to require inspection, and nearly 2,000 (including 1,500 residential buildings) of those were red-tagged, forbidding entry; another 1,000 buildings were red-tagged in other affected communities. Over 8,800 buildings were yellow-tagged as safe only for limited use in Los Angeles; 5,000 more were yellow-tagged in other communities.

Most modern buildings (those built to post-1976 codes) performed significantly better than structures built to prior codes, however, three types of structures built to modern codes had a higher-than-expected frequency of damage:

1. Tilt-up concrete buildings

2. Steel moment-frame buildings
3. Aboveground reinforced concrete parking structures

The most severe damage generally occurred to buildings designed to codes used before 1976, with damages divided into three categories:

1. Buildings constructed with suspect materials and techniques, such as tilt-ups, non-ductile concrete frames, and un-retrofitted unreinforced masonry.
2. Buildings designed or constructed with irregular configurations – for example, multistory buildings with inadequately braced first stories (like most of the apartment houses that collapsed) and hillside homes.
3. Buildings with poor design, construction, or maintenance.

In spite of the good performance of most buildings, the economic losses were high. The damage to nonstructural elements – heating and air conditioning systems, lighting fixtures, suspended ceilings, partitions, and equipment – was costly. Nonstructural damage is a significant matter as the value of these elements generally ranges from slightly over half of a single-family dwelling's cost to as much as 80 percent of the total cost of many large buildings. Nonstructural items make possible a building's function and damage can disable buildings that are otherwise safe to occupy. Some hospitals had to close even though they had suffered only minor structural damage, because of damage to sprinkler systems, power systems, and other vital equipment.

Fires

The earthquake caused relatively few fires, although the most spectacular, the fire at a break in a natural-gas transmission line on Balboa Boulevard, was shown so often on television that it gave the perception of a more pervasive problem. Good fortune played a critical role in keeping fires from spreading; there was no wind, and the area was not experiencing a dry spell. Another major factor, which was not a matter of luck, was the high level of planning and training in local fire departments and utilities, and the earthquake risk-mitigation programs of many businesses and governments.

Nonetheless, there were several problem areas:

- A number of fires in mobile home parks were caused when mobile homes fell from their supports and severed natural-gas connections. IN all, 172 mobile homes were destroyed by fire. These mobile home fires were all too predictable; they remain a constant threat throughout the state.
- Communications failures hampered the response of emergency responders.
- Damage to water delivery systems seriously limited the efforts of firefighters.

Lifelines

Lifelines – transportation systems, communications, and water, gas, and electric utilities – suffered extensive damage. The effect of individual lifeline failures and combined failures is both direct (gas fires) and indirect (interference with emergency response). The combined loss of water pressure, electrical power, emergency power, and communications, coupled with significant gas-related fires, present a clear and

unacceptable hazard with far-reaching implications for emergency response and disaster recovery. Only good fortune prevented an even greater disaster.

Transportation Systems

Despite the retrofits and improvements in design that were made between the 1971 San Fernando earthquake and this 1994 event, some freeway overpasses collapsed and other portions of the highway system failed. Most of the bridges that were severely damaged were designed prior to the changes instituted as a result of the San Fernando (1971) and Loma Prieta (1989) earthquakes. Bridges designed and built after the lat4e 1970s performed relatively well. The direct cost to repair damaged freeway structures was over $350 million.

Communications

Communications failures during this disaster resulted in breakdowns in service, misunderstandings, lack of information for making decisions, and, in some cases, loss of lives and property. Emergency and normal communications systems were disrupted by damage, loss of electrical power, increased call volume, and call convergence into and out of the affected area. The disruption ranged from delayed dial tones to nonfunctional radio systems. Cellular phones worked well, but experienced overload. Radio communication among various police and fire agencies was hampered by too few mutual-aid channels, incompatibility of dissimilar radio systems, and the use of exclusive frequency bands.

Many hospital radios and phones did not work, requiring the Los Angeles Fire Department to send runners and fire units to determine the status of hospitals; paramedic and emergency medical services in the San Fernando Valley had communication problems; the Los Angeles County Medic Alert Center broke down; the Hospital Emergency Administrative Radio system was inoperable in the area of greatest earthquake impact; Reddi-Net, a computerized system owned by the Hospital Council of Southern California that links 86 hospitals, failed. Equipment damage and lack of employee training took their toll.

Electricity

About two million customers in the Los Angeles area lost electric power following the earthquake. Although power to most customers was restored, those near the epicenter, including hospitals and police and fire stations, were without power. Electric utilities made significant progress in “hardening” their generating and distribution facilities as a result of lessons learned in the San Fernando, Loma Prieta, and other earthquakes, but this event presented new problems. For the first time, transmission towers were toppled at a few locations. Power was restored to most of the region within one day and the hardest-hit areas within three days.

Gas

Damage to natural-gas transmission and distribution system caused fires, including a spectacular fire on a major thoroughfare, and interrupted service. The earthquake demonstrated that some older pipelines are vulnerable to failure in areas of ground deformation, but that newer pipelines faired well. Because gas-related fires are a major source of losses, efforts to minimize losses and control leaks are important.

Water

Damage to the area's water supply systems, from northern California and the Colorado River, as well as to distribution lines interrupted supplies and hampered fire fighting. The earthquake damaged five major aqueducts, disrupting the supply from the north. These pipelines serve treatment facilities that prepare water for the areas of Santa Clarita, Simi Valley, and San Fernando Valley. As was the case following the 1971 San Fernando earthquake, significant repairs were also required on local water distribution systems. Water was unavailable to some of the areas hardest hit by the earthquake for several weeks.

The Economy

The $20 billion in losses that often has been quoted as the cost of the Northridge earthquake coves, primarily, the physical damage to structures and lifelines. It does not include many of the costs related to loss of use, loss of bus9iness, loss of productivity, and relocation of businesses. Though they are significant, these losses are often overlooked. It was estimated that the loss of use of parts of the transportation system following the earthquake cost $65 billion in delays and lost productivity.

Overall productivity losses in the Los Angeles area in the days following the earthquake were estimated at $1 billion (Romero, 1994). Indirect economic effects such as loss of tax revenue, short- and long-term loss of productivity, and ripple effects such as foreclosures, abandonment of equity, and redistribution of commercial activities are extremely difficult to calculate with any degree of accuracy. Such imprecision doesn't lessen the impact, especially to the victims.

Loss of business is creating major problems in some areas, where these businesses provided both needed services and jobs. Although some businesses, trades, and professions are seeing an increase in demand for their services and products, fueled in part by government grants, low-interest loans, and other assistance, many small businesses remain closed or are struggling because the nearby residential properties that housed their normal customer base remain vacant. Nine months after the earthquake, nearly 50 percent of the small businesses in the most heavily affected area of Northridge were still not open. The commercial district in Fillmore and many commercial properties in communities from the San Fernando Valley to Santa Monica still awaited repairs.

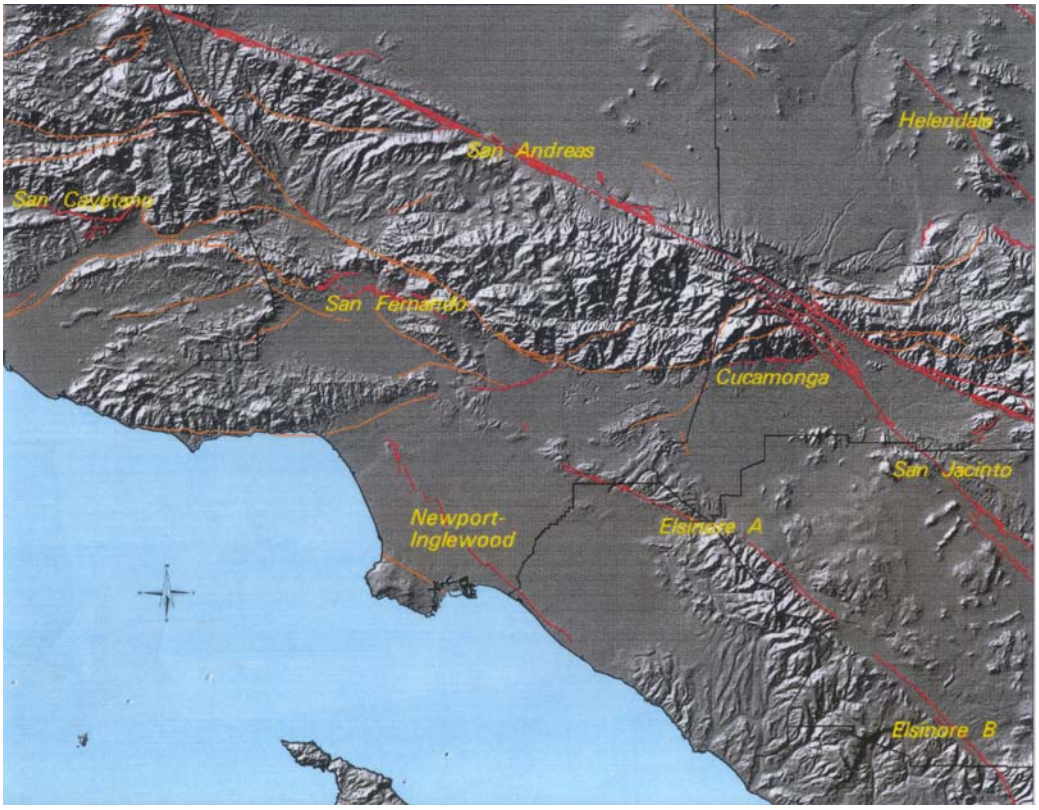
Insured losses exceeded insurance industry expectations, illustrating the importance of reducing earthquake risk. The California Department of Insurance estimates that over 300,000 claims for earthquake damage repair had been filed as of October 1, 1994. The size of individual claims from the Northridge earthquake has been, on average, two or three times greater than claims from previous earthquakes. Insurance companies expect to pay approximately $11 billion in claims, and some have been driven to the brink of insolvency. Many insurance companies believing their earthquake insurance risk exceeds their ability to pay future claims, have moved to limit the number of policies written for earthquake and homeowners' coverage in California. Lasting effects will be felt in terms of the availability of insurance, the amount paid for premiums, and the quality of coverage.

Faults

Historical and geological records show that California has a long history of seismic events. Southern California is probably best known for the San Andreas Fault, a 400 mile long fault running from the Mexican border to a point offshore, west of San Francisco. "Geologic studies show that over the past

1,400 to 1,500 years large earthquakes have occurred at about 130 year intervals on the southern San Andreas fault. As the last large earthquake on the southern San Andreas occurred in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades.

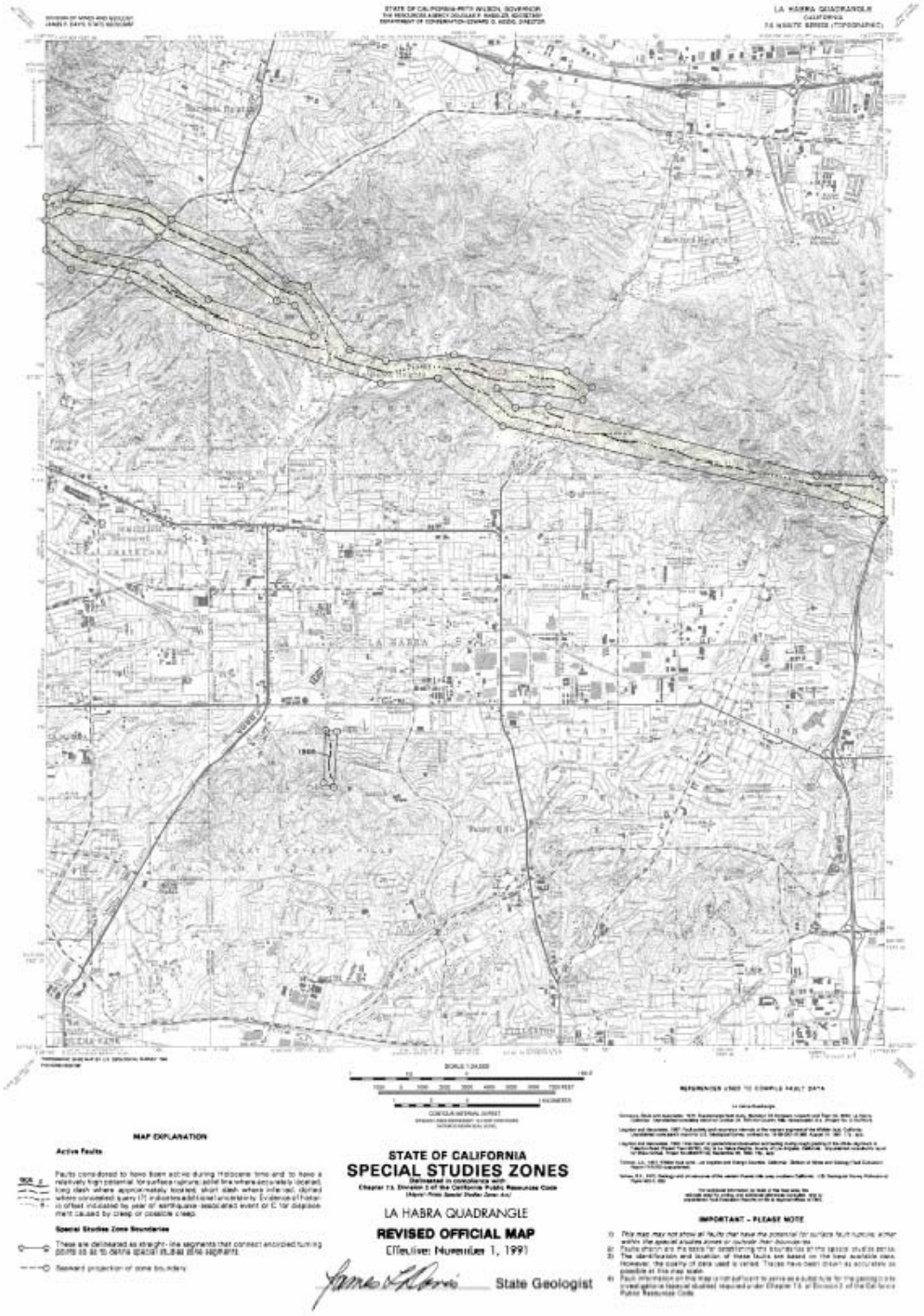
But San Andreas is only one of dozens of known earthquake faults that crisscross Southern California. Some of the better known faults include the Newport-Inglewood, Whittier, Chatsworth, Elsinore, Hollywood, Los Alamitos, and Palos Verdes faults. Beyond the known faults, there are a potentially large number of "blind" faults that underlie the surface of Southern California. One such blind fault was involved in the Whittier Narrows earthquake in October 1987.

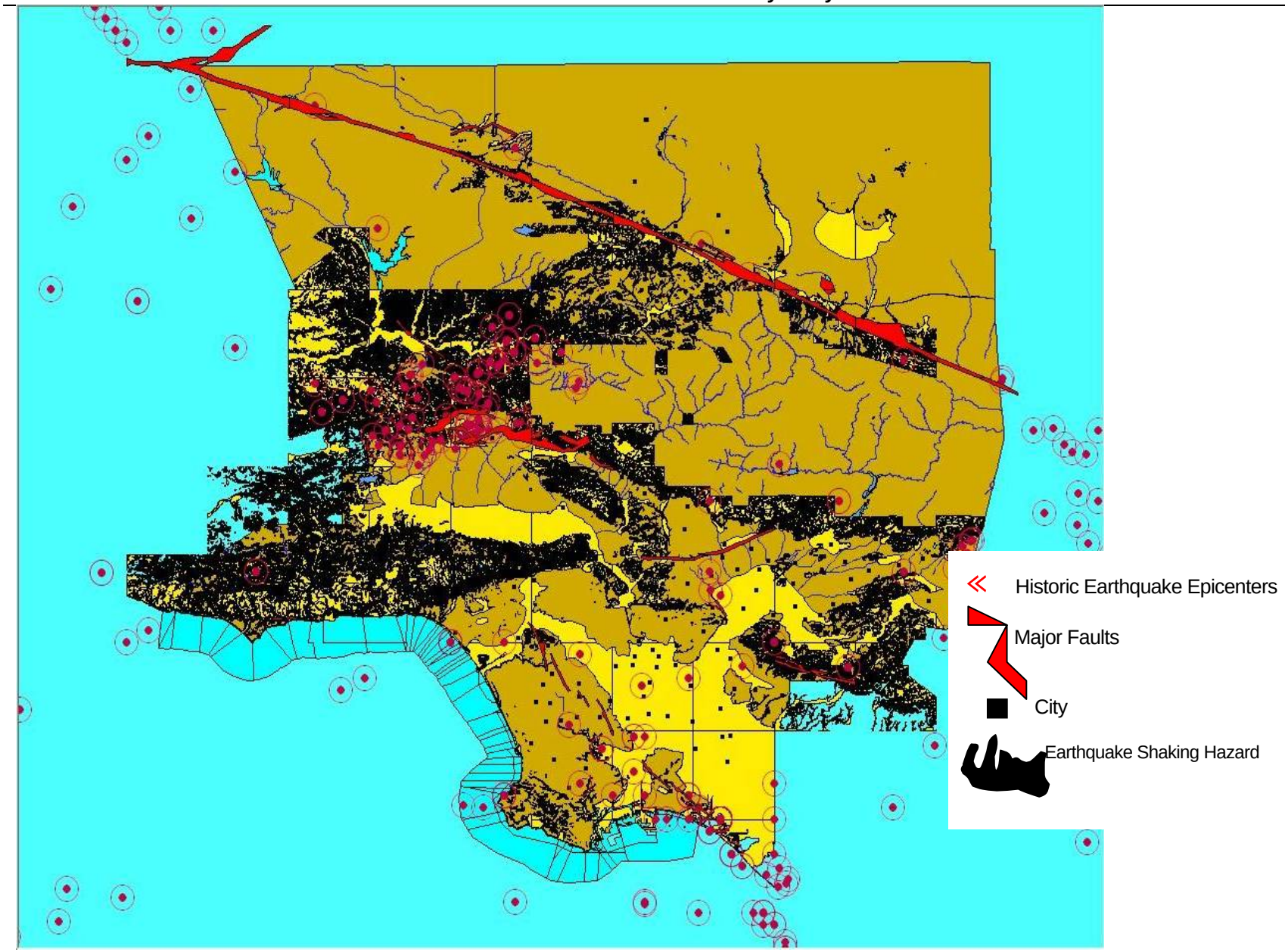


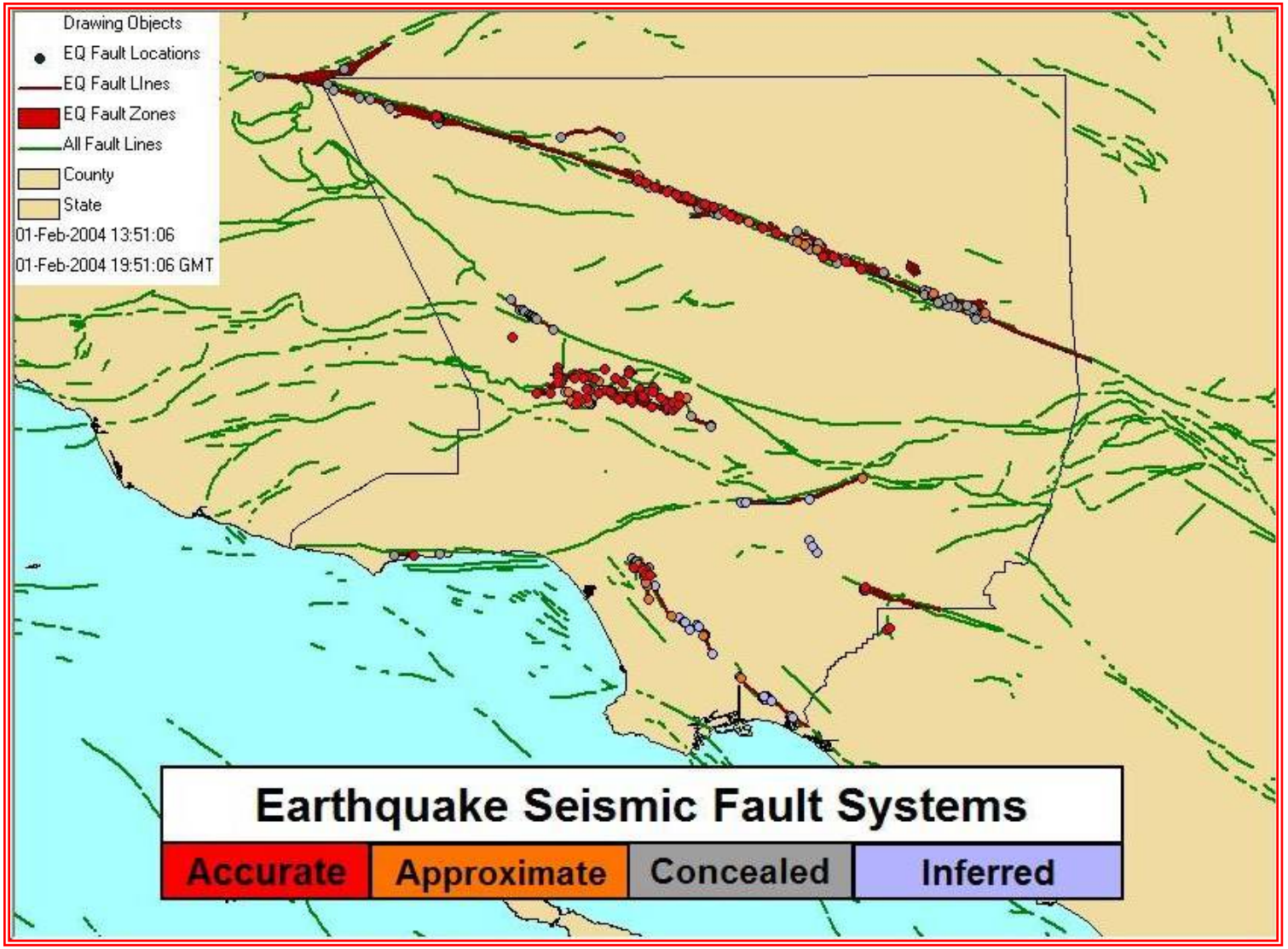
Although the most famous of the faults, the San Andreas, is capable of producing an earthquake with a magnitude of 8+ on the Richter scale, some of the "lesser" faults have the potential to inflict greater damage on the urban core of the Los Angeles Basin. Seismologists believe that a 6.0 earthquake on the Newport-Inglewood would result in far more death and destruction than a "great" quake on the San Andreas, because the San Andreas is relatively remote from the urban centers of Southern California.

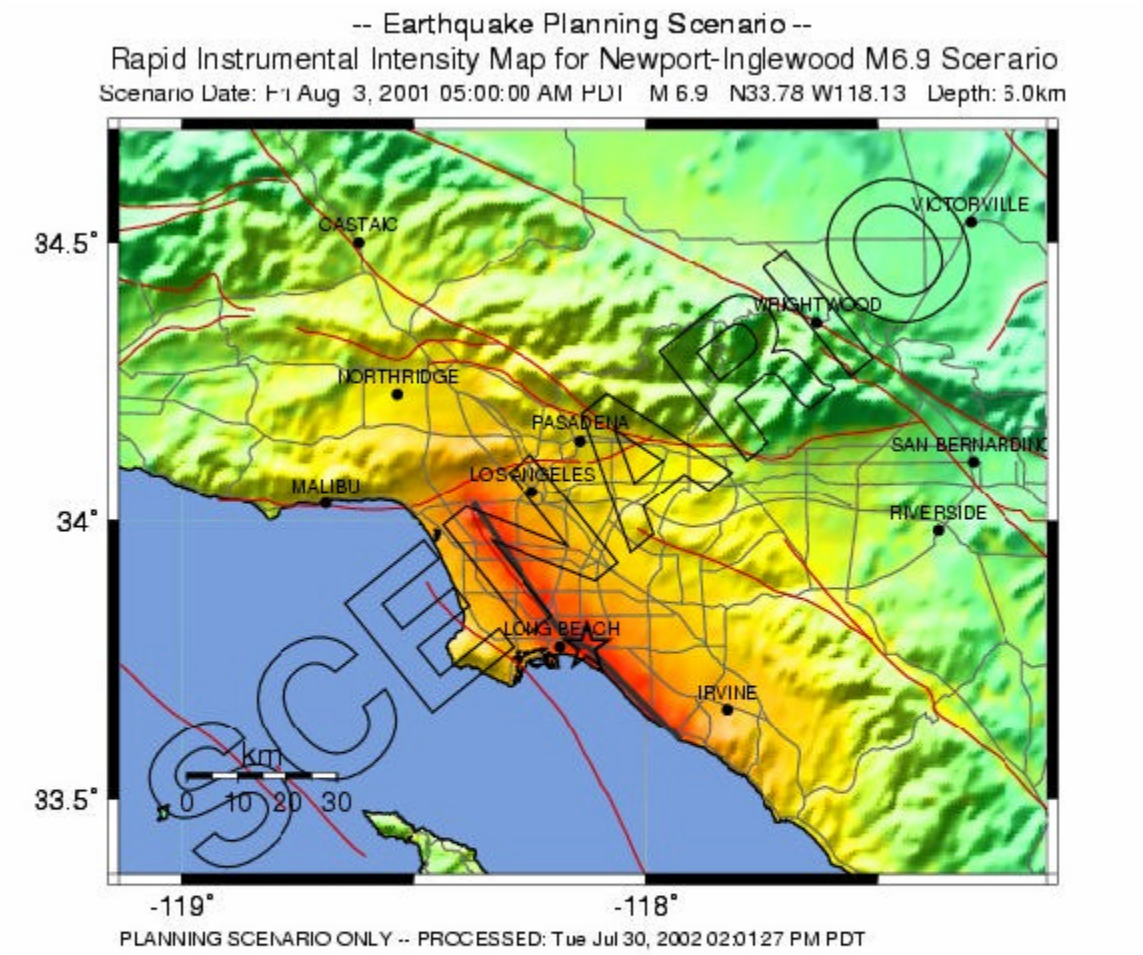
For decades, partnerships have flourished between the USGS, Cal Tech, the California Geological Survey and universities to share research and educational efforts with Californians. Tremendous earthquake mapping and mitigation efforts have been made in California in the past two decades, and public awareness has risen remarkably during this time. Major federal, state, and local government agencies and private organizations support earthquake risk reduction, and have made significant contributions in reducing the adverse impacts of earthquakes. Despite the progress, the majority of California communities remain unprepared because there is a general lack of understanding regarding earthquake hazards among Californians.

Alquist-Priolo Fault Map

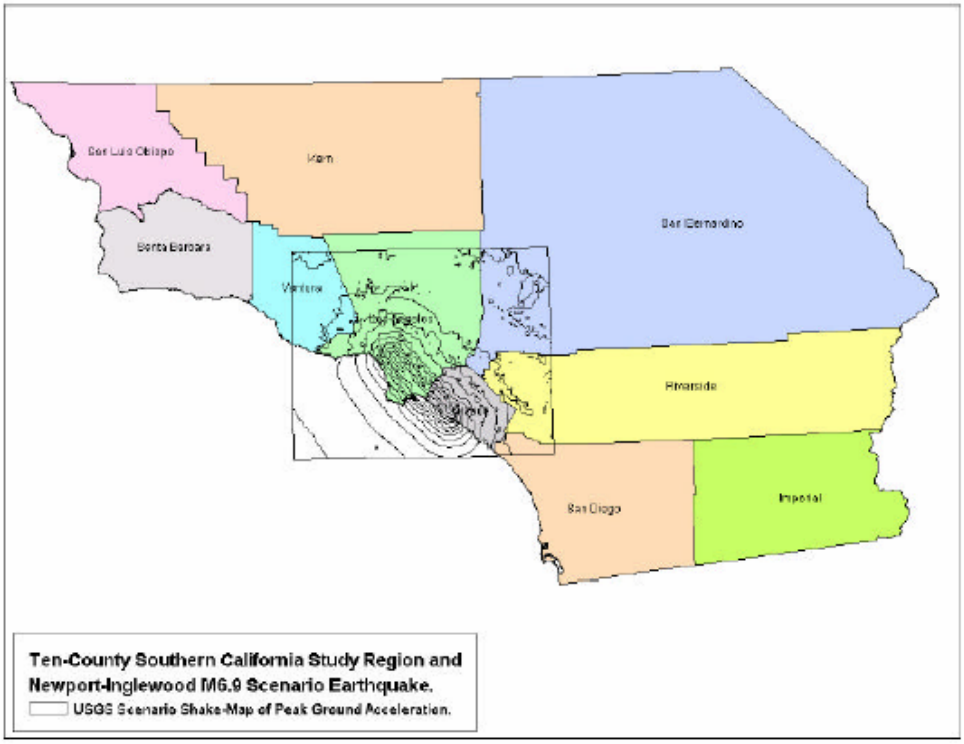


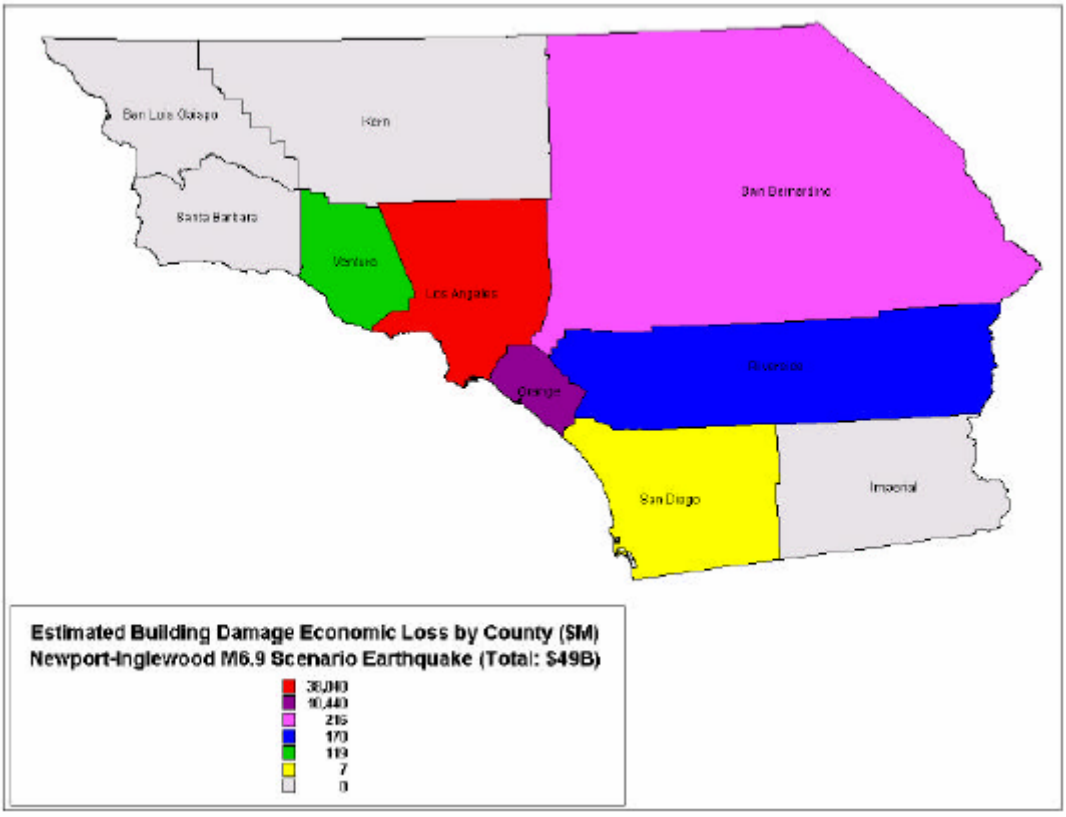

Historic Earthquake Epicenters
Major Faults
City
Earthquake Shaking Hazard

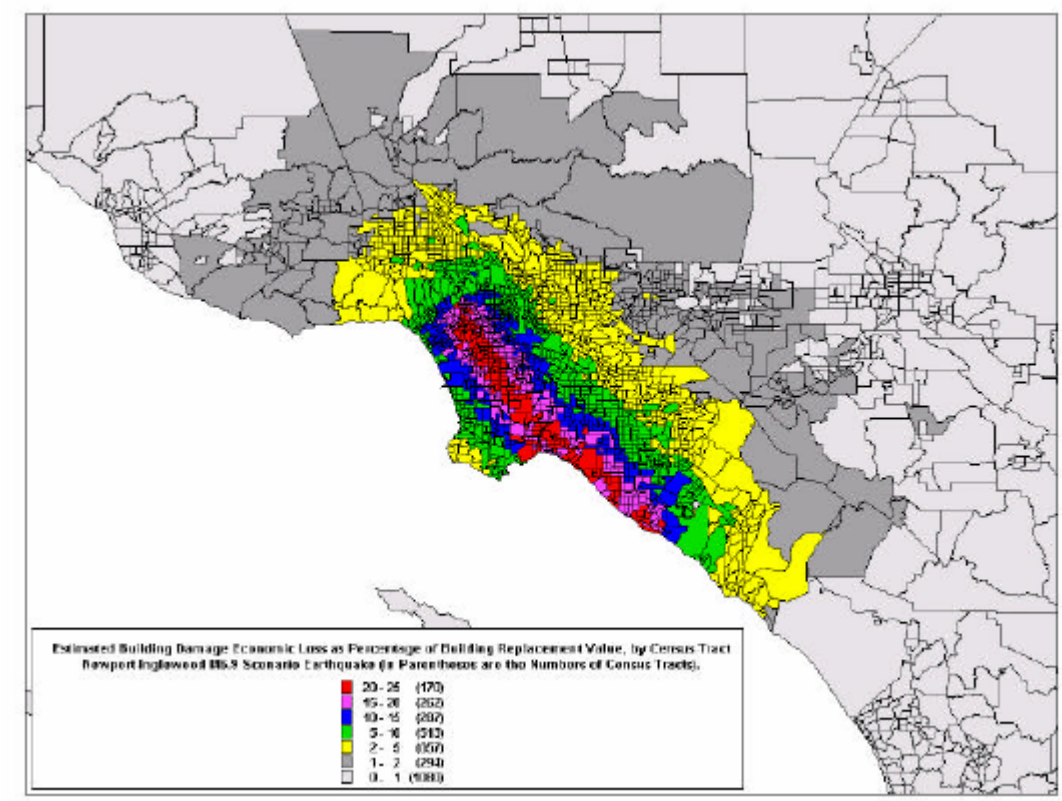

Drawing Objects
EQ Fault Locations
EQ Fault LInes
EQ Fault Zones
All Fault Lines
County
State
01-Feb-2004 13:51:06
01-Feb-2004 19:51:06 GMT
Earthquake Seismic Fault Systems
Accurate
Approximate
Concealed
Inferred

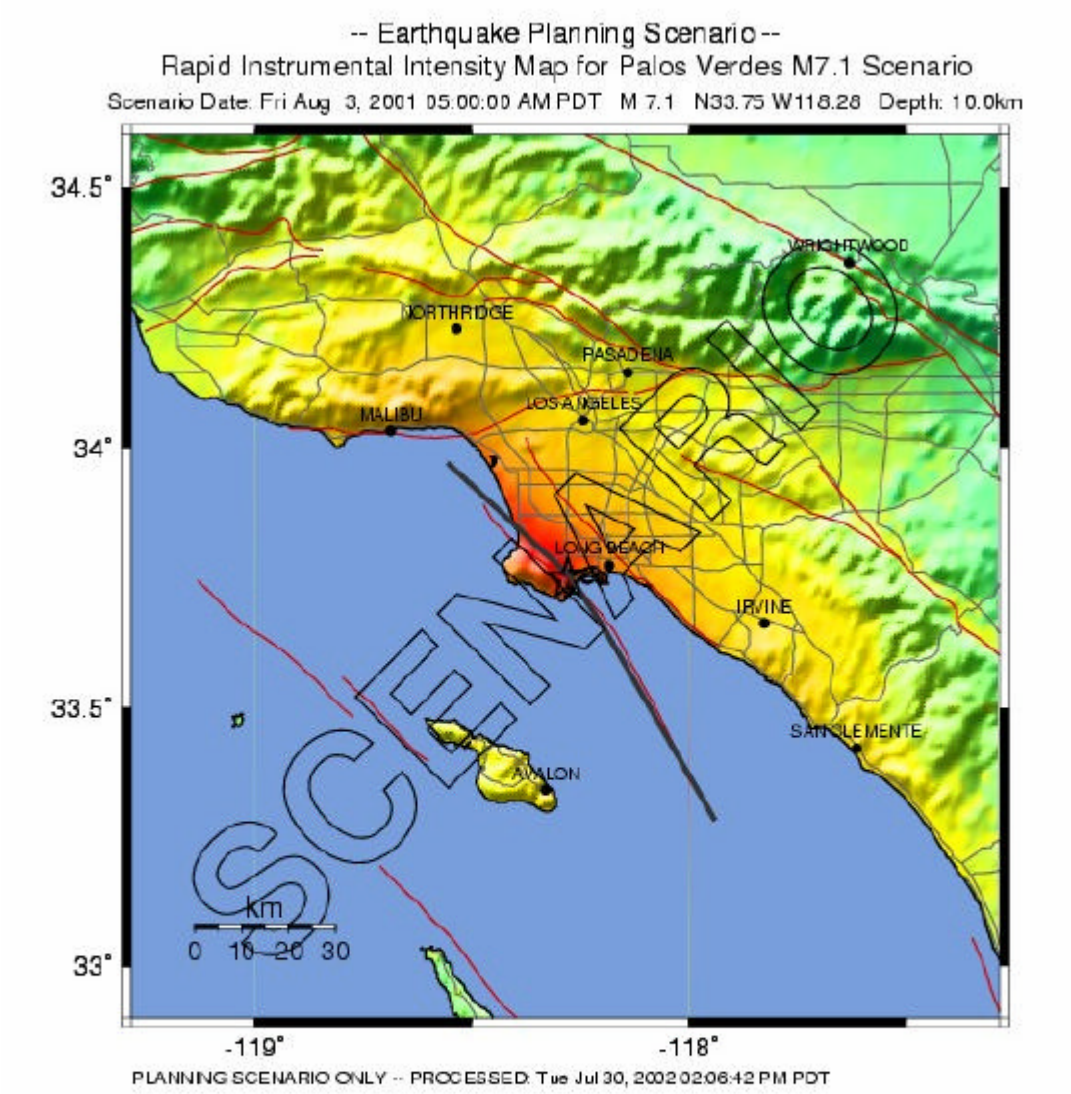


PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	*<.17*	*.17-1.4*	*1.4-3.9*	*3.9-9.2*	*9.2-18*	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	*16-31*	*31-60*	*60-116*	*>116*
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

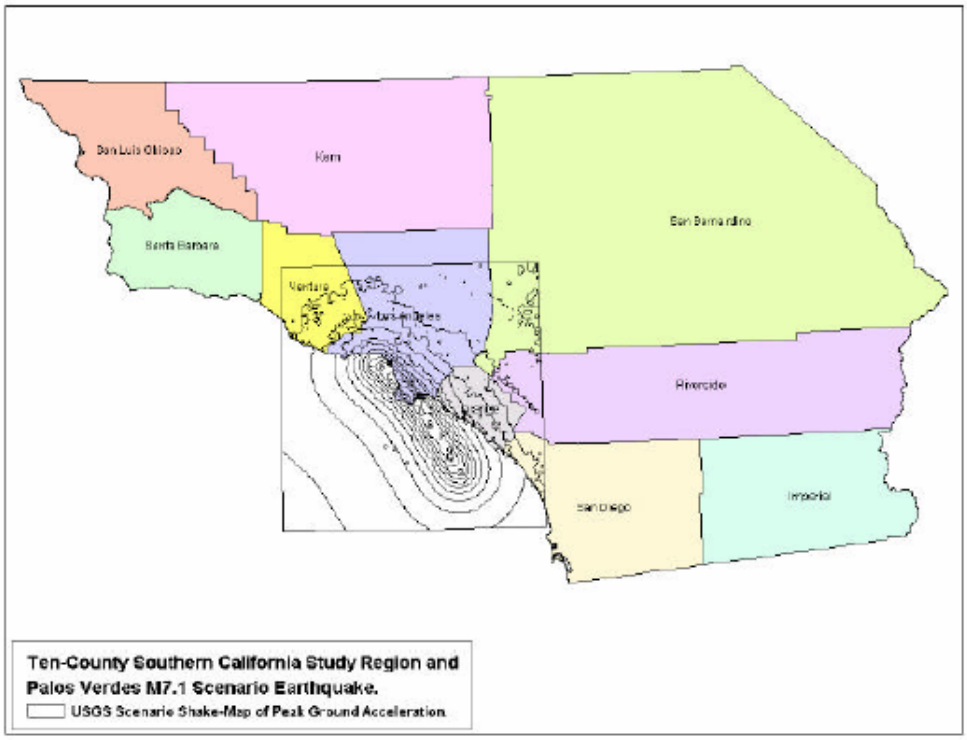

San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Ten-County Southern California Study Region and
Newport-Inglewood M6.9 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.

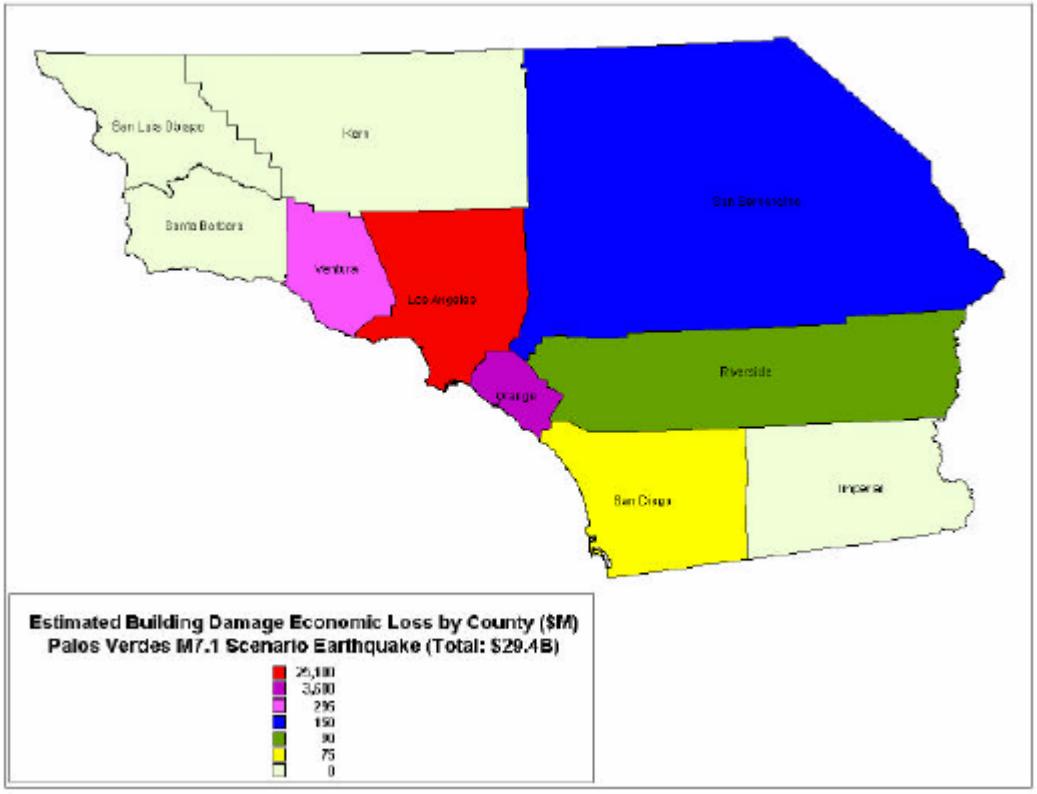

San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Newport-Inglewood M6.9 Scenario Earthquake (Total: $49B)
38,000
10,440
285
170
119
7
0

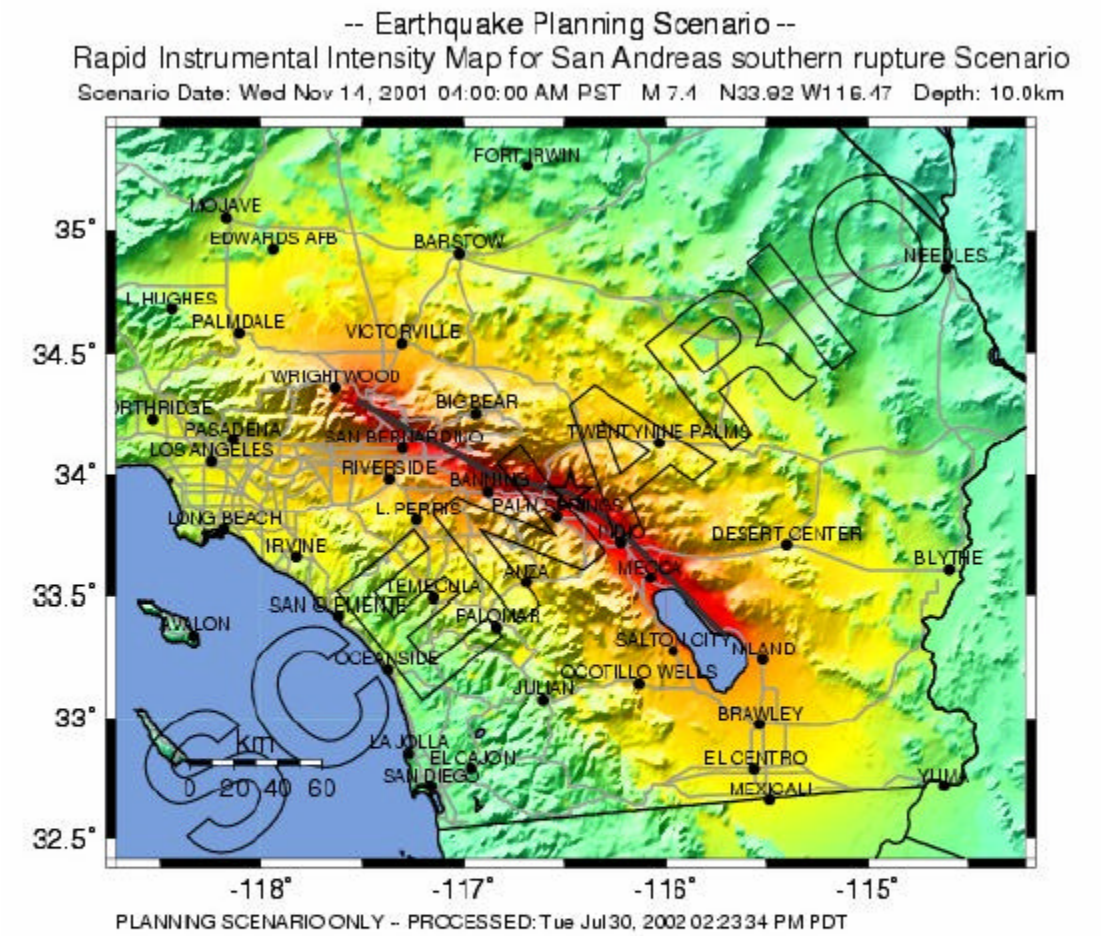

Estimated Building Damage Economic Loss as Percentage of Building Replacement Value, by Census Tract
Newport Inglewood M6.9 Scenario Earthquake (in Parentheses are the Numbers of Census Tracts).
20 - 25 (170)
15 - 20 (252)
10 - 15 (287)
5 - 10 (513)
2 - 5 (557)
1 - 2 (294)
0 - 1 (938)



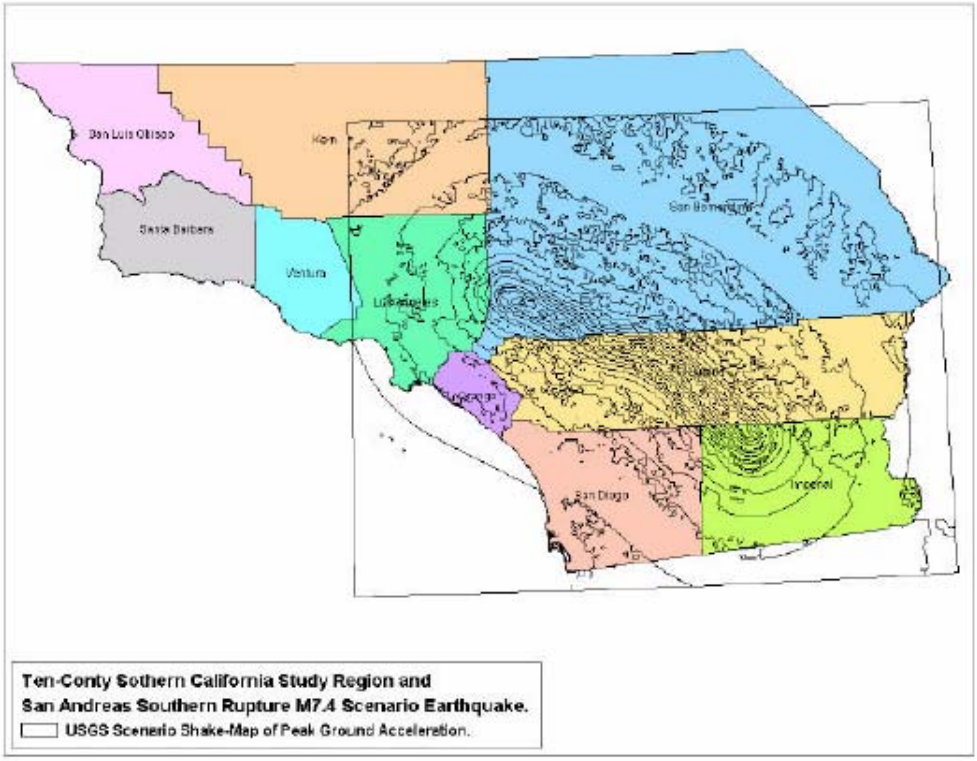
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC. (%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

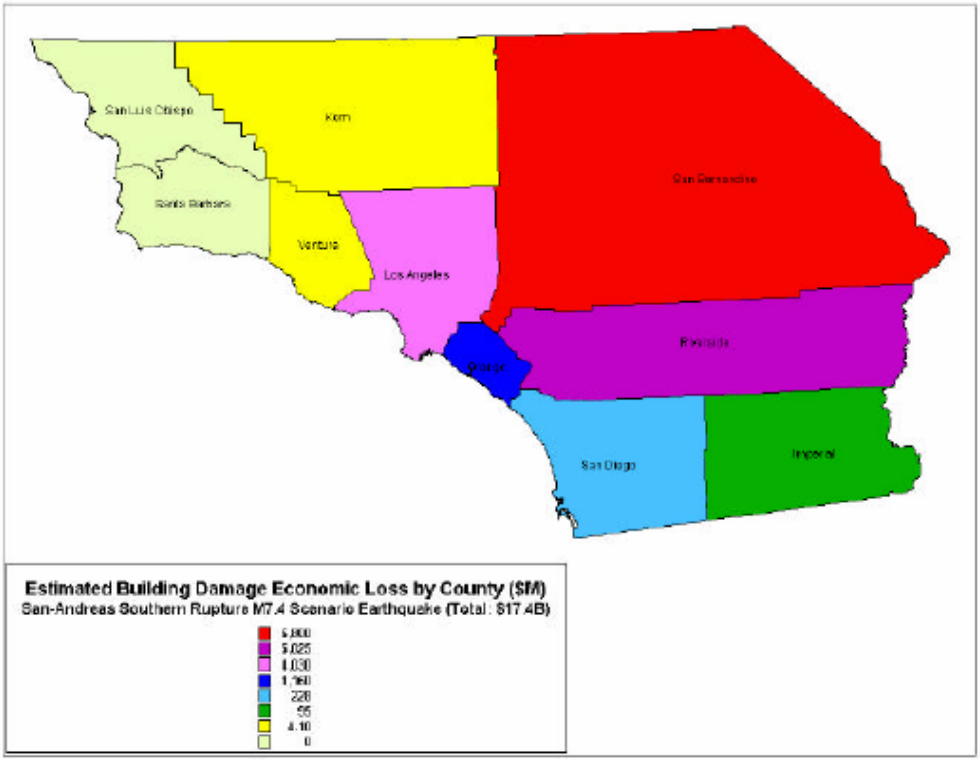

San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
San Diego
Imperial
Ten-County Southern California Study Region and
Palos Verdes M7.1 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration

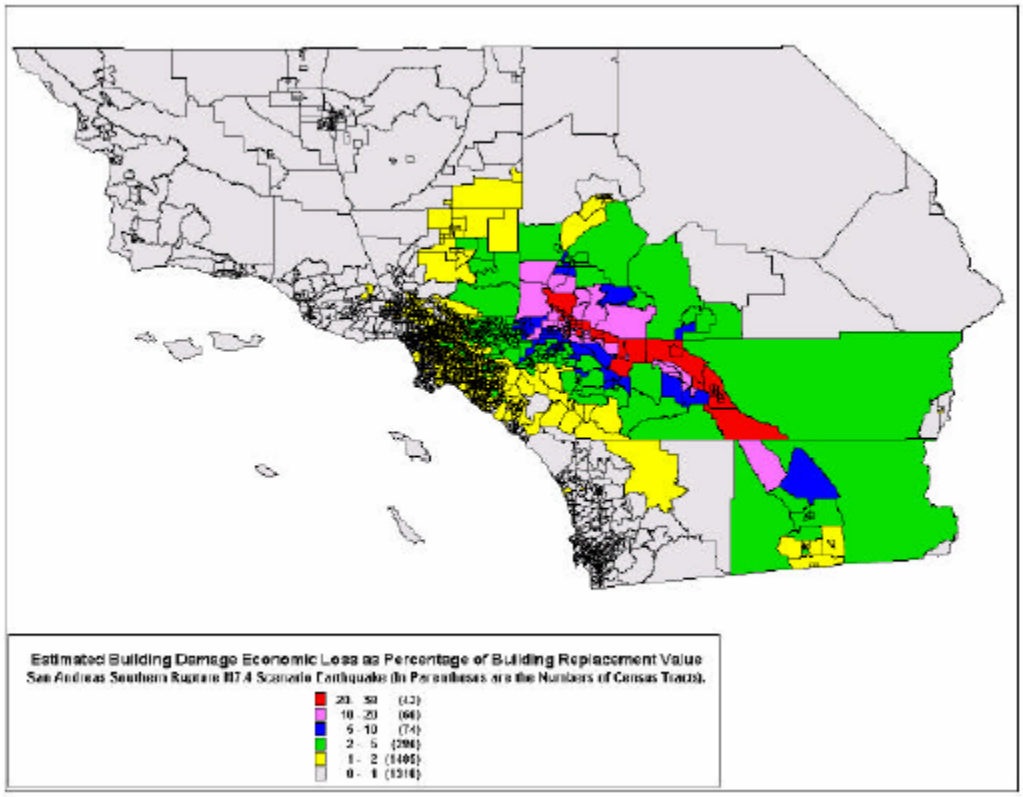

San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Palos Verdes M7.1 Scenario Earthquake (Total: $29.4B)
25,100
3,600
295
150
80
75
0

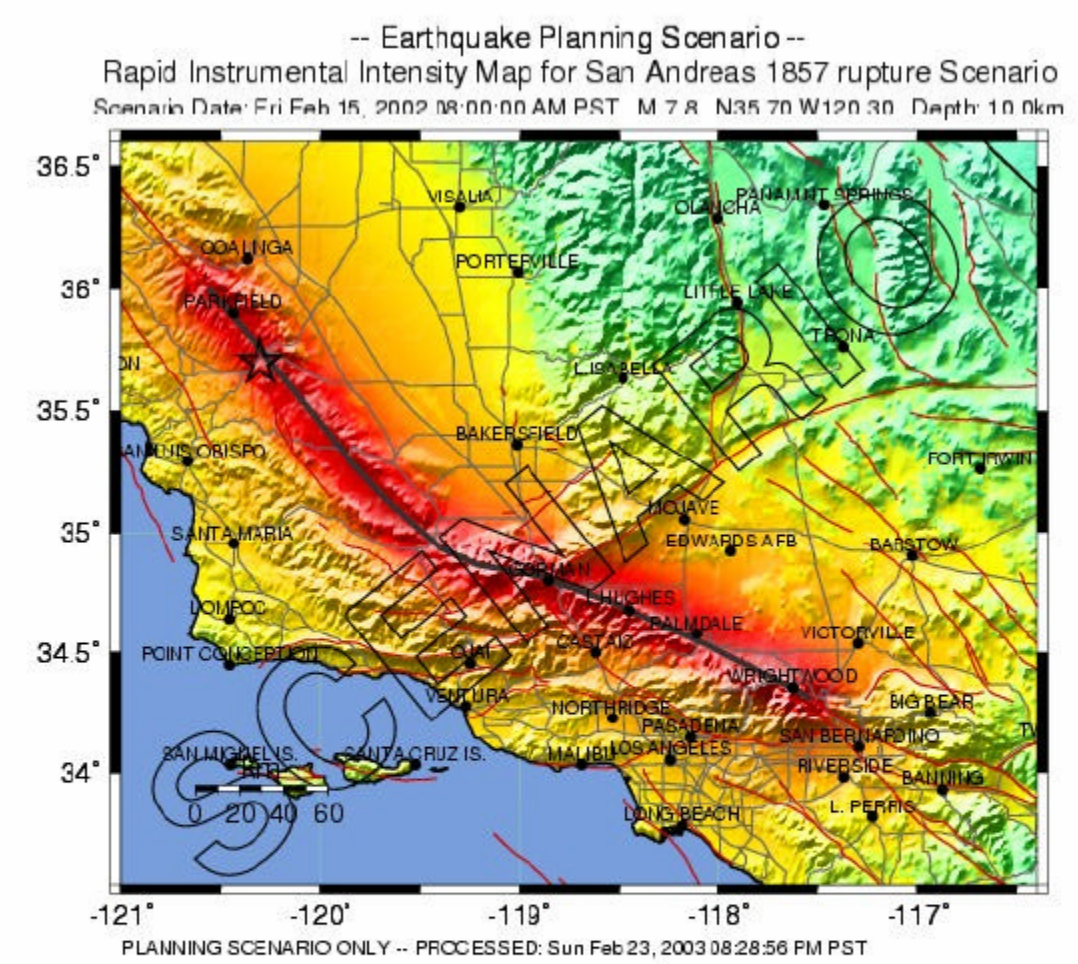


PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	*<.17*	*.17-1.4*	*1.4-3.9*	*3.9-9.2*	*9.2-18*	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	*16-31*	*31-60*	*60-116*	*>116*
INSTRUMENTAL INTENSITY	I	I-III	IV	V	VI	VII	VIII	IX	X+

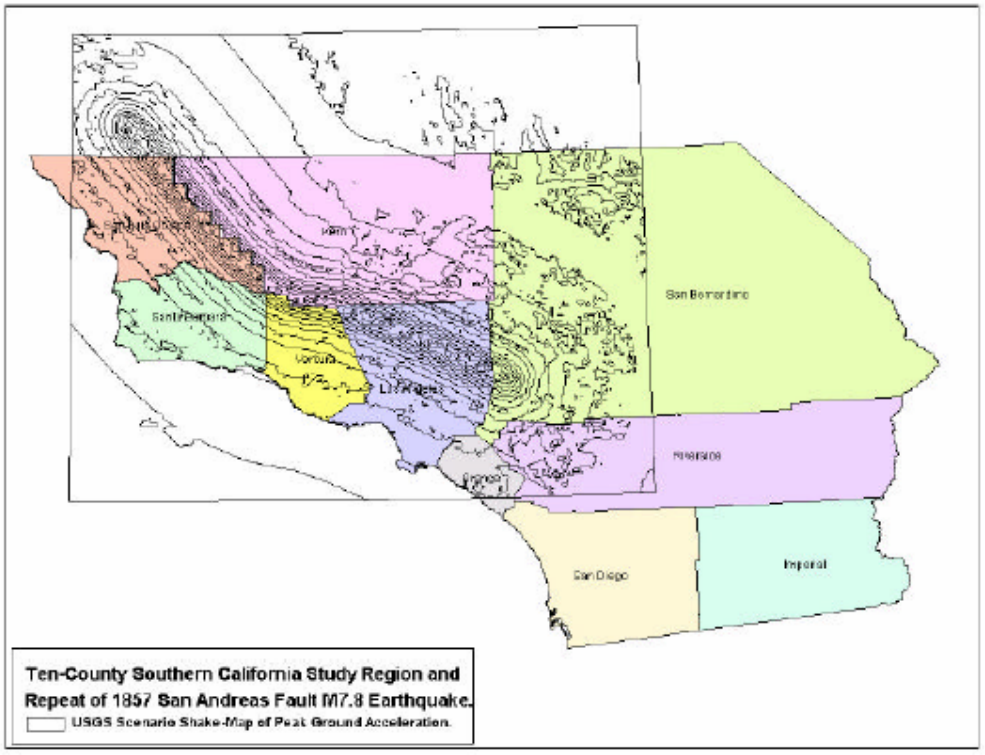

San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
Ten-Conty Sothern California Study Region and
San Andreas Southern Rupture M7.4 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.

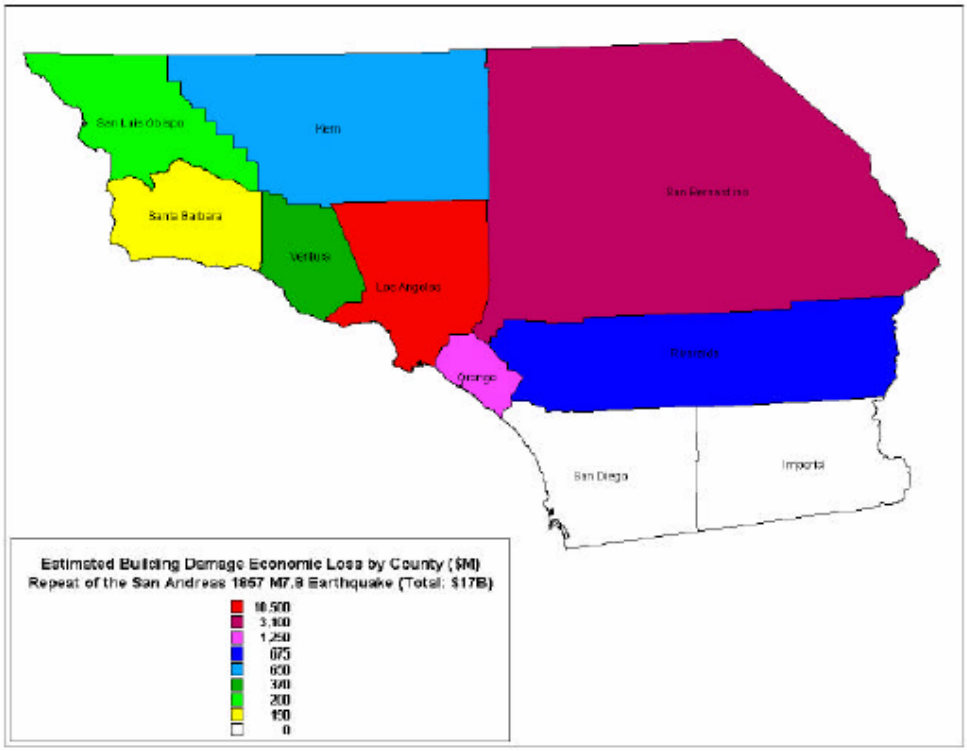

San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
San-Andreas Southern Rupture M7.4 Scenario Earthquake (Total: $17.4B)
5,800
5,025
4,030
1,760
228
55
4.10
0

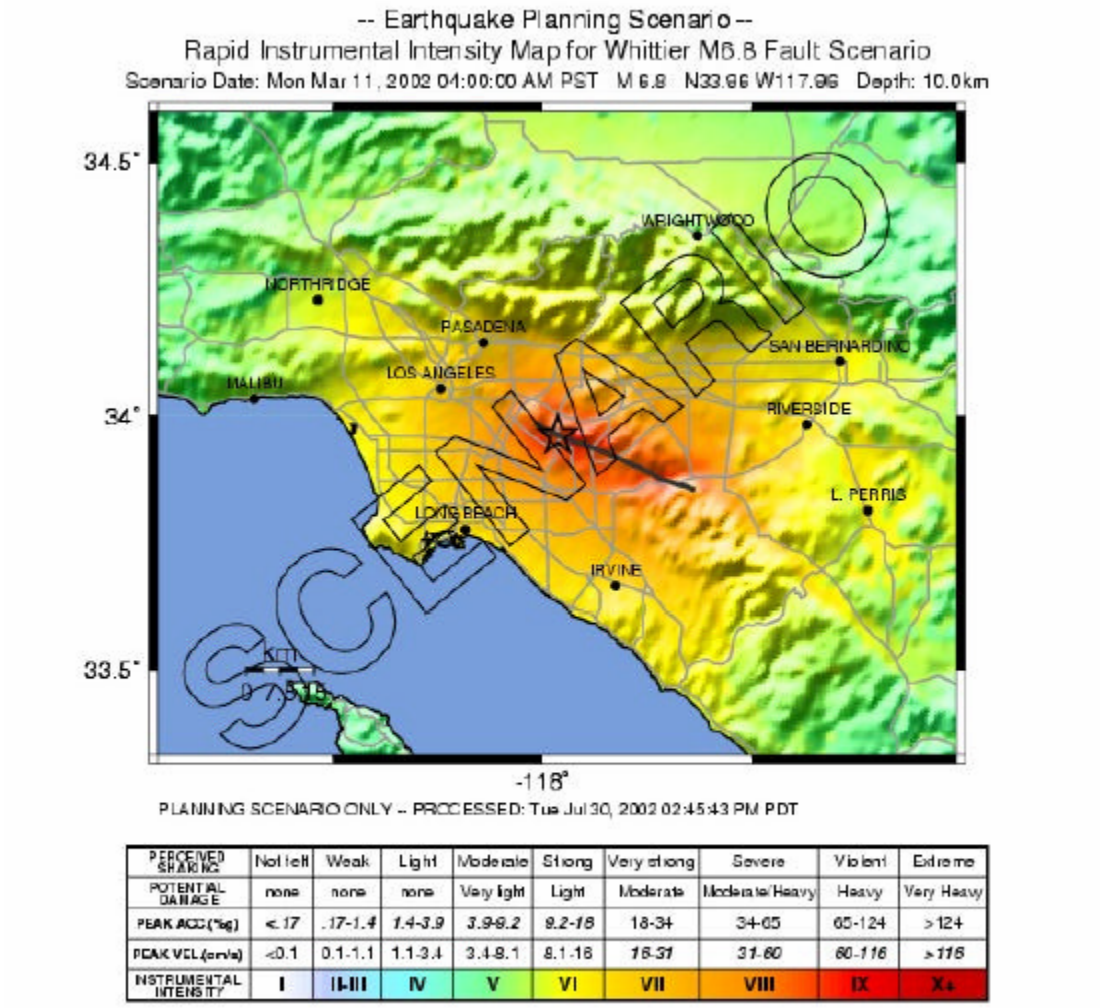

Estimated Building Damage Economic Loss as Percentage of Building Replacement Value
San Andreas Southern Rupture M7.4 Scenario Earthquake (In Parentheses are the Numbers of Census Tracts).
20 - 50 (12)
10 - 20 (66)
5 - 10 (74)
2 - 5 (206)
1 - 2 (1405)
0 - 1 (1514)



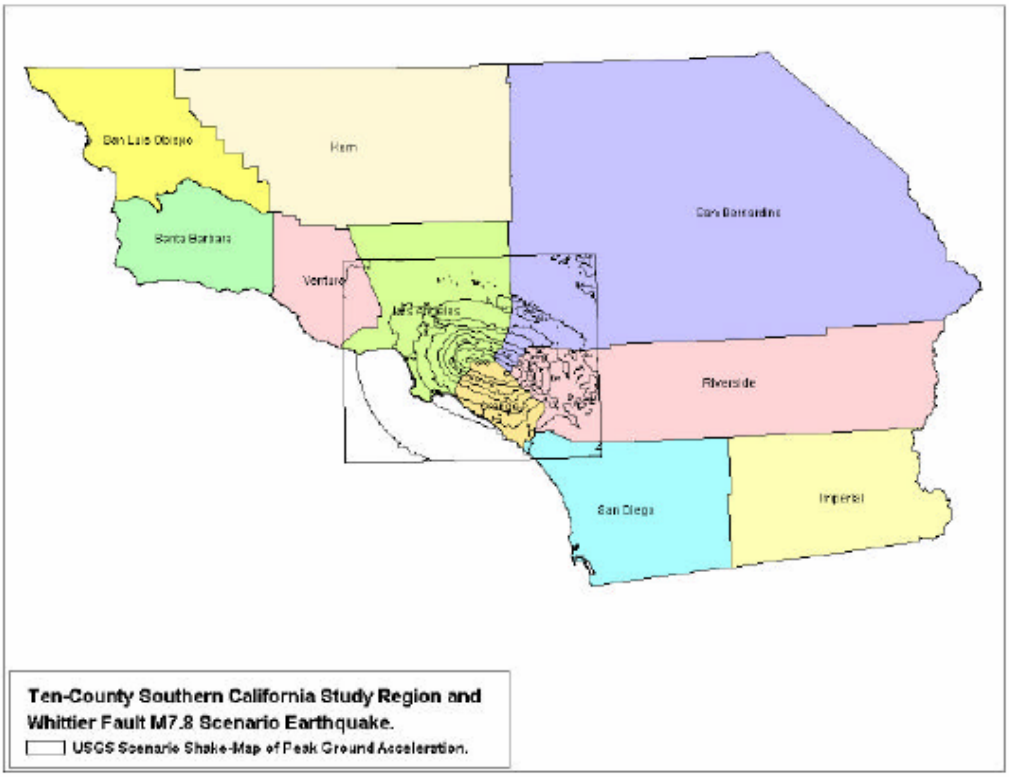
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	*<.17*	*.17-1.4*	*1.4-3.9*	*3.9-9.2*	*9.2-18*	18-34	34-65	65-124	>124
PEAK VEL(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	*16-31*	*31-60*	*60-116*	*>116*
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

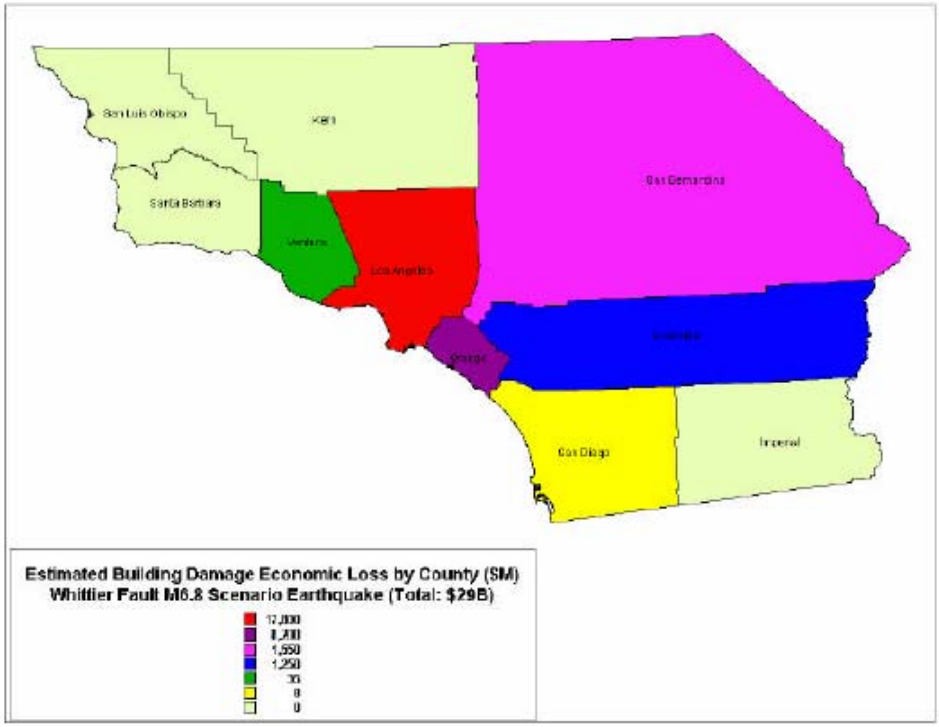

San Bernardino
Riverside
San Diego
Imperial
Ten-County Southern California Study Region and
Repeat of 1857 San Andreas Fault M7.8 Earthquake.
USGS Scenario Shake-Map of Peat Ground Acceleration

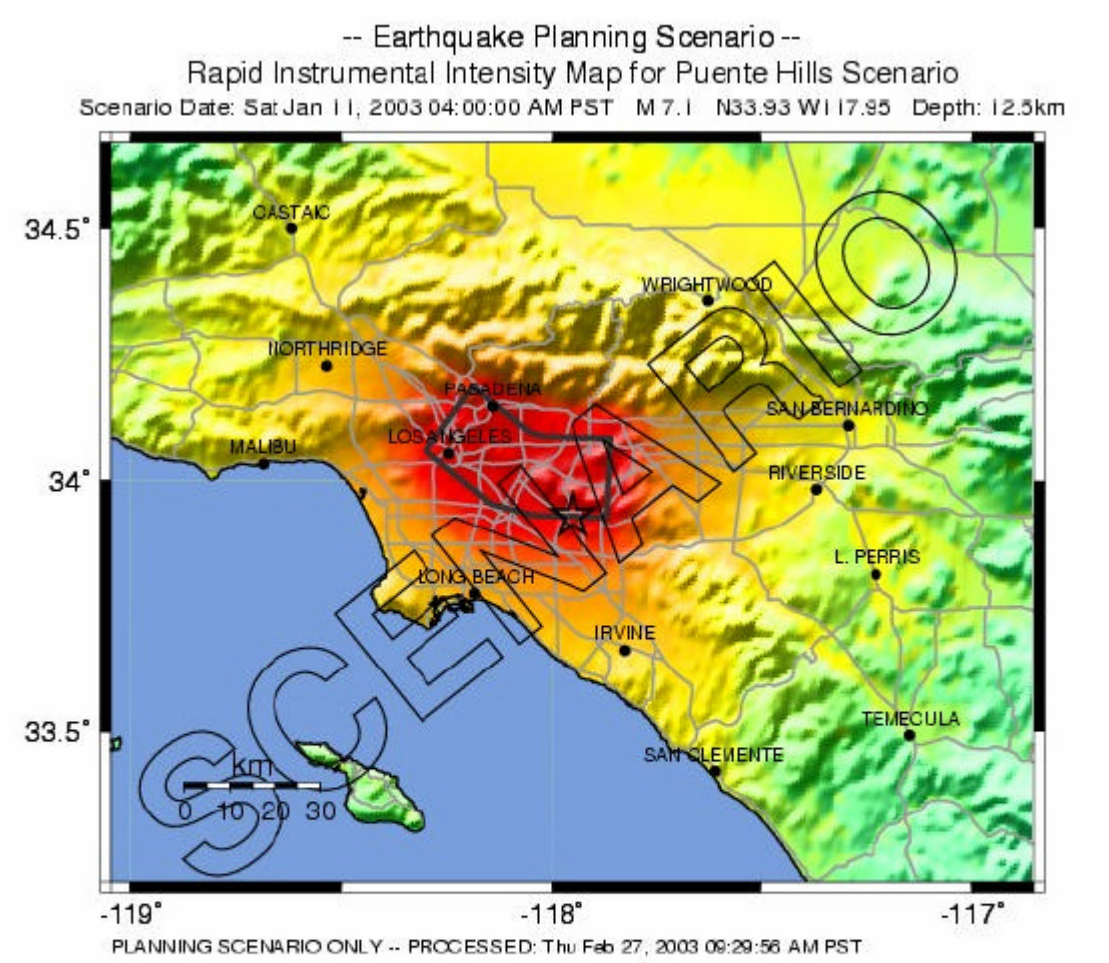

Kern
Santa Barbara
Los Angeles
Orange
San Diego
Estimated Building Damage Economic Loss by County ($M)
Repeat of the San Andreas 1857 M7.8 Earthquake (Total: $17B)



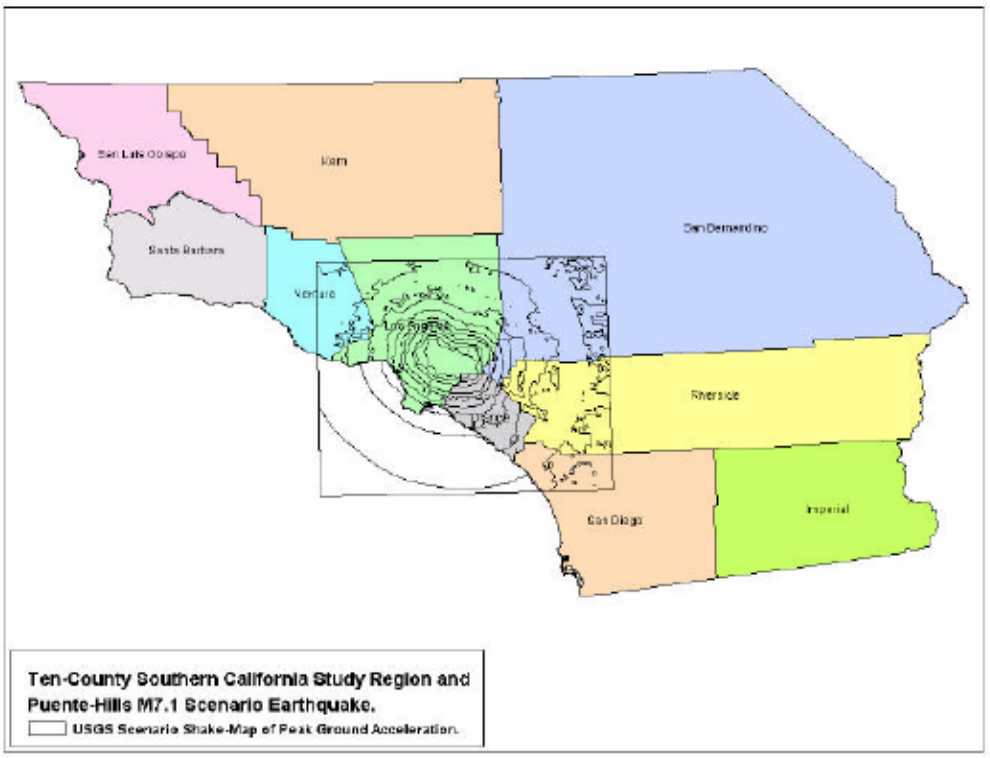
PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	<.17	.17-1.4	1.4-3.9	3.9-9.2	9.2-18	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	16-31	31-60	60-116	>116
INSTRUMENTAL INTENSITY	I	I-III	IV	V	VI	VII	VIII	IX	X+

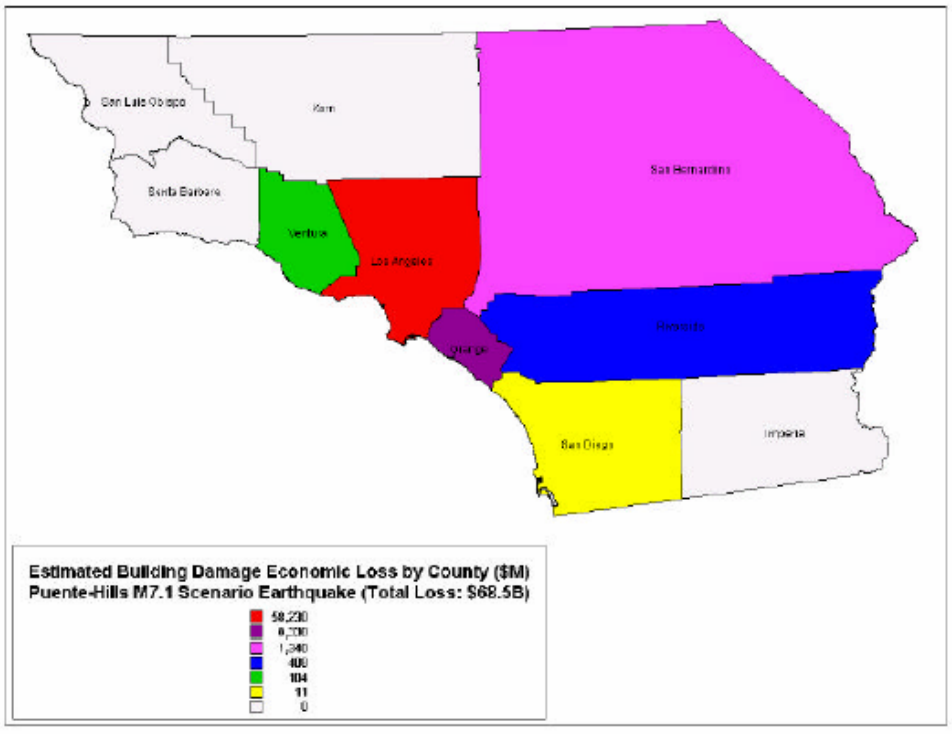

San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
San Diego
Imperial
Ten-County Southern California Study Region and
Whittier Fault M7.8 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.

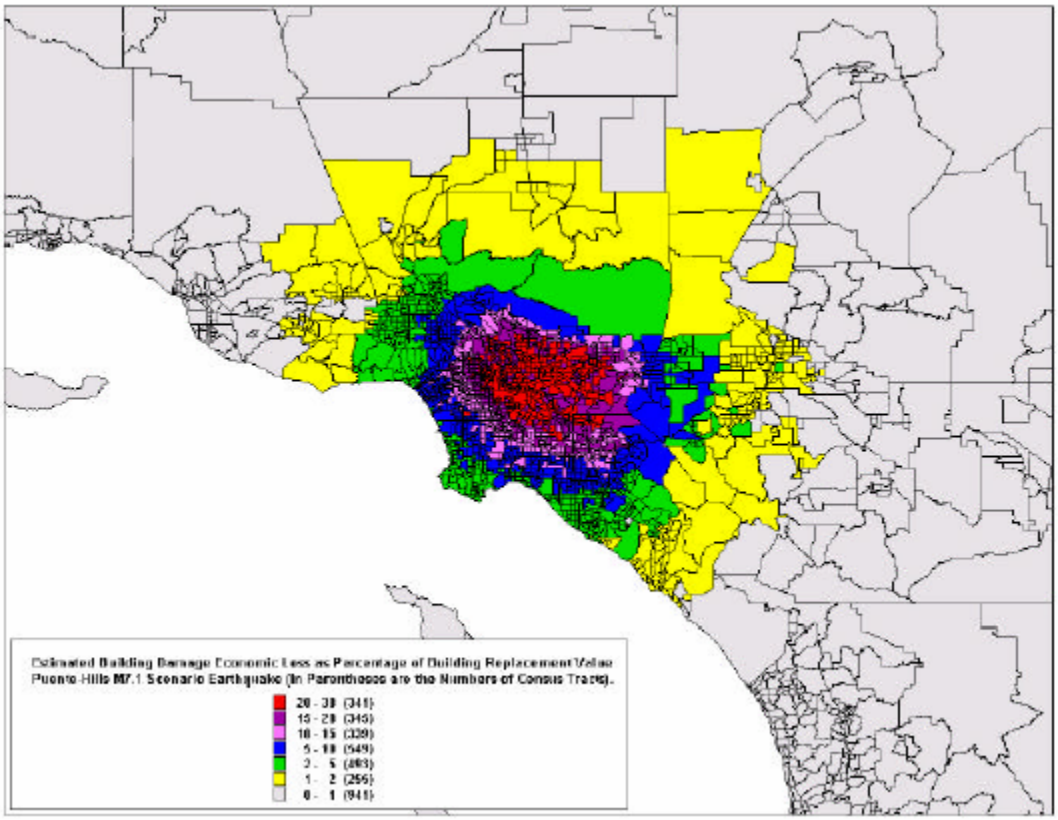

Kern
San Bernardino
Santa Barbara
Los Angeles
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Whittier Fault M6.8 Scenario Earthquake (Total: $29B)



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
PEAK ACC.(%g)	*<.17*	*.17-1.4*	*1.4-3.9*	*3.9-9.2*	*9.2-18*	18-34	34-65	65-124	>124
PEAK VEL.(cm/s)	<0.1	0.1-1.1	1.1-3.4	3.4-8.1	8.1-16	*16-31*	*31-60*	*60-116*	*>116*
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+


San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
San Diego
Imperial
Ten-County Southern California Study Region and
Puente-Hills M7.1 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.


San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Puente-Hills M7.1 Scenario Earthquake (Total Loss: $68.5B)
58,230
8,200
1,340
400
104
11
0


Estimated Building Damage Economic Loss as Percentage of Building Replacement Value
Puente Hills Mf.1 Scenario Earthquake (In Parentheses are the Numbers of Census Tracts).
20 - 30 (341)
15 - 20 (345)
10 - 15 (329)
5 - 10 (549)
3 - 5 (483)
1 - 2 (256)
0 - 1 (941)

Flood

Flood was rated a HIGH PRORITY HAZARD in the City of Paramount

Impact: The impact of flooding is high due to the northeast corner of their city. If flooding occurred in that area, the impact would be transportation and economic loss. Depending on the amount of flooding, the impact could possibly vary for minor to major.

City of Paramount is designated by the National Flood Insurance Program as a zone "C", or City of minimal flood hazard. It is anticipated that a large portion of the City will be designated in Zone AR beginning July 5, 1998.

Specific Situation

According to the Flood Insurance Administration, the entire City of Paramount, with the exception of approximately 22 acres in the northeast corner is in a flood hazard area.

EMERGENCY READINESS STAGES

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

Stage I (Watch Stage)

Light to Moderate rain

Stage II

Moderate to heavy rain. Paramount Public Works notified to post flooding warnings in affected areas.

Stage III

Continuation of heavy rain. Streets should be closed to traffic.

Stage IV

Threat to private property and persons. Areas should be evacuated.

Lower Los Angeles River & Rio Hondo Channel

Background

Floods are part of the history of Los Angeles. Extensive floods in 1914, 1934 and 1938 inundated the basin and demonstrated the need for a comprehensive flood control system. Even while the backbone system was being constructed by the U.S. Army Corps of Engineers (Corps), continued storm activity in the 1950s and 1960s resulted in a local

demand for greater flood protection. In response, the electorate approved Storm Drain Bond Issue Programs in 1952, 1958, 1964 and 1970. An additional Bond Issue Program in 1993 was approved by the Board of Supervisors. These programs totaled over $1 billion to address the local flooding concerns. Today, the Los Angeles County Drainage Area (LACDA) system consists of over 470 miles of mainstream and tributary channels, 2,400 miles of storm drains, over 70,000 catch basins, 33 pump plants, 129 debris basins and 20 flood control and water conservation dams.

In February 1980, the first evidence that the backbone of our flood control system was inadequate, particularly the lower Los Angeles River and Rio Hondo Channel, was seen when floating debris was found on top of the Los Angeles River levee near Wardlow Road in Long Beach. The storm was not the predicted 100-year design flood and yet the channel's capacity had apparently been reached.

At the request of the County, the Corps conducted a comprehensive review, and determined that the existing system, specifically the Rio Hondo Channel from Whittier Narrow's Reservoir to the confluence with the Los Angeles River (11.9 miles), and the lower Los Angeles River from the confluence with the Rio Hondo Channel to its mouth at Long Beach (11.7 miles) no longer provides adequate flood protection. A 100-year flood (the size of storm that has a one percent chance of occurring every year) would exceed the system's capacity in several locations, flooding about 82 square miles of vast urban development, affect over 500,000 people living in the floodplain and cause a staggering $2.3 billion in flood damages. Floodwater would average 2-4 feet deep with ponding up to 10 feet. Currently, the lower Los Angeles River provides flood protection ranging from a 25 to 40 year storm. This situation is now the most serious potential flooding problem in the County.

General Situation

Two different types of flow are anticipated to occur outside of the channel itself: 1) flows greater than the limited channel capacity referred to as "overflow" which remain outside but contiguous with the channel due to topography and 2) flows greater than channel capacity that leave channel confines and follow alternate flow paths through a community are referred to as "breakout."

The criteria for levee failure is based upon the duration and magnitude of flood waters overtopping the channel wall or levee. If the flow reaches 7,500 gallons per second (gals/s) above the channel's capacity for at least one (1) hour, then levee failure is assumed to result. Levee failures or "breakouts" are assumed to occur at four different locations along two reaches:

Reach 1 - Rio Hondo Channel from Whittier Narrows Dam to confluence with lower Los Angeles River (total length 11.9 miles).

Rio Hondo Channel at Beverly Boulevard C levee failure is anticipated with a breakout flow of 102,500 gal/s on the east bank for a duration of over 35 hours. Overflow would occur along the east bank of the levee's channel from the breakout point at Beverly Boulevard downstream to Stewart and Gray Road.

Rio Hondo Channel at Stewart and Gray Road C levee failure is anticipated with a breakout flow of 20,000 gal/s on both banks for a duration of 2.5 hours. Overflow would occur on both banks to Imperial Highway and pond behind Rio Hondo Channel and Los Angeles River levees.

Reach 2 - Lower Los Angeles River from the confluence with Rio Hondo Channel to the Pacific Ocean (total length 11.7 miles)

Los Angeles River at Fernwood street - levee failure is anticipated with a breakout flow of 561,000 gal/s on both banks for a duration of nearly 32 hours. Overflow would continue on both banks, from Fernwood downstream to 10th Street on the east bank and to Artesia Freeway on the westbank.

Los Angeles River at Wardlow Road C levee failure is anticipated with a breakout flow of 340,000 gal/s on both banks for a duration of 26 hours. Overflow would continue on the west bank from the Compton Creek confluence downstream to the Pacific Ocean.

Five prioritized areas within the 100-year flood boundary have been established for systematically alerting, warning and/or evacuating communities which may be in danger. The areas are based on the potential "breakout" locations and also on predicted flooding depths as shown on the flood boundary map**.** The 100-year Flood Boundary map delineates the areas with the highest potential of flooding or potential for flood damages (Area 1) and diminish to areas of less significant flooding potential (Areas 2 through 5). The areas are defined and mapped as follows:

Areas 1A through 1D C Locations of breakout points, as described previously. Highest priority for evacuation.

- At Beverly Boulevard, east bank of the Rio Hondo Channel.
- At Stewart and Gray Road, both banks of the Rio Hondo Channel.
- At Fernwood Street, both banks of the Los Angeles River.
- At Wardlow Road, both banks of the Los Angeles River.

Area 2 C Area where flooding depths are expected to be greater than 8 feet above the surrounding ground elevation.

Areas 3A through 3F C Areas where flooding depths are expected to be between 4-8 feet above the surrounding ground elevation including the breakout near the Compton Creek confluence with the Los Angeles River.

Areas 4A through 4E C Areas where flooding depths are expected to be between 2-4 feet above the surrounding ground elevation.

Area 5 C Area where flooding depths are expected to be less than 2 feet above the surrounding ground elevation. Evacuations are not anticipated for this area.

Urban Flooding

Portions of the City of Paramount 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, over burdened pumping stations 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, including the Los Angeles River Flood Control Channel, which runs north and south along the western boundary 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.

Specific Situation

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

- Western boundary of the City, from about Orange Avenue, when the tide gates to Los Angeles River Flood Control Channels close due to heavy rain.

- All-American Park, a retention basin utilized as a public park during normal weather.

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.

Severe Weather & Destructive Winds

Severe Weather and Destructive Winds were rated a MODERATE PRIORITY HAZARD in the City of Paramount.

Impact; The amount of rains, strength of winds and location determines the impact to the City. The affects are potential loss of life, destruction to buildings, loss of transportation or evacuation routes, and economic loss.

Windstorms

The potential risk of widespread damage in Los Angeles County from wind is not as considerable as the risk from earthquakes or wildfires. Nevertheless, severe windstorms pose a significant risk to life and property by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes.

High winds can and do occasionally cause damage to homes and businesses. Severe windstorms can present a very destabilizing effect on the dry brush that covers local hillsides and urban wildland interface areas and increase wildfire threat. Destructive impacts to trees, power lines, and utility services also are associated with high winds.

Santa Ana Winds

Based on local history, most incidents of high wind in the Los Angeles County are the result of Santa Ana wind conditions. While high impact wind incidents are not frequent in the area, significant Santa Ana wind events have been known to negatively impact areas of the County.

Santa Ana winds are blustery, warm – (often hot) – dry winds that blow from the east or northeast. These occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles basin. Typically they occur from October to March when cooler air in the desert increases air pressure and creates strong westerly winds. Generally speaking, wind speed must reach 25 knots to be classified as a Santa Ana wind.


Great Basin
Sierra Nevada
San Francisco
Santa Ana Winds
San Gabriel Mts.
Los Angeles
San Bernardino Mts.
San Diego

The map above shows the direction of the Santa Ana winds as they travel from the stable, high-pressure weather system called the Great Basin High through the canyons and towards the low pressure system off the Pacific. Areas of Los Angeles County are in the direct path of the ocean-bound Santa Ana winds.

While the effects of Santa Ana Winds are often overlooked, it should be noted that in 2003, two deaths in Southern California were directly related to the fierce condition. A falling tree struck one woman in San Diego. The second death occurred when a passenger in a vehicle was hit by a flying pickup truck cover launched by Santa Ana winds.

In windstorms, reports of dislodged roofs and fallen trees and power lines are common. The winds are not considered major widespread threats to population and property, but do involve responses from emergency service personnel. Fallen power lines may cause widespread power outages and fire. Falling trees can occasionally cause fatalities and serious structural damage. These incidents are rare as well as localized.

Hazard Extent

Windstorms that affect Los Angeles County, notably Santa Ana winds, are not location specific but rather impact much of the area. Passes between hillsides are susceptible to slightly higher wind speeds, although the amount of unsheltered development in hillside passes is not substantial.

In the case of a Santa Ana wind – which can last several days – hazards created by wind-fallen trees or utility poles can threaten property and have the potential for personal injury and even death. Many older neighborhoods have larger trees. Although these trees are usually well-rooted enough to withstand higher speed winds, broken and falling tree limbs can create significant hazards.

Strong Santa Ana winds typically occur annually. It is unlikely that Los Angeles County will be subject to widespread damage from wind storm activity but there is potential for isolated events, such as damage to property or communications. Although Santa Ana winds are frequent, the occurrence wind with enough velocity to cause significant damage is much less.

Vulnerabilities

There have been past occurrences of winds strong enough to create damage to property in Los Angeles County. However, there has not been a recorded instance of a windstorm strong enough to create wide spread damage. Damage is usually done to roofs and trees damage, and is generally isolated.

Life and Property

Based on the historical data for the region, windstorm events can be expected, perhaps annually, across widespread areas of the County. This can result in i emergency responses. Both residential and commercial structures with vulnerable or weak construction are susceptible to damage. Wind pressure can create a direct and frontal assault on a structure, pushing walls, doors, and windows inward. Conversely, passing currents can create lift suction forces that pull building components and surfaces outward. With extreme wind forces, roofs or entire buildings can fail, causing considerable damage. Debris carried by strong winds can contribute directly to loss of life, and indirectly to the failure of protective building envelopes, siding, or walls. When severe windstorms strike a community, resulting downed trees, power lines, and damaged property are major hindrances to emergency response and disaster recovery.

Utilities

Historically, falling trees have been the major cause of power outages in the region as a result of high winds. Windstorms can cause flying debris that cut utility lines. For example, tree limbs breaking in winds of only 45 mph can be thrown over 75 feet. As such, overhead power lines may receive damage in even relatively minor windstorms. Falling trees bringing electric power lines down to the ground create the possibility of electric shock.

Infrastructure

Windstorms can damage buildings, power lines, and other property and infrastructure because of falling trees and branches. During wet winters, saturated soils cause trees to become less stable and more vulnerable to uprooting from high winds. Windstorms can result in collapsed or damaged buildings or blocked roads and bridges, damaged traffic signals, streetlights, and parks. Roads blocked by fallen trees during a windstorm may have severe consequences to people who need to be accessed by emergency workers.

Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted. Industry and commerce can suffer losses from interruptions in electric services and from extended road closures. They can also sustain direct losses from damaged buildings, injured personnel, and damage to other vital equipment. There are direct consequences to the local economy resulting from windstorms related to both physical damages and interrupted services.

Transportation

Windstorm activity can have an impact on local transportation in addition to the problems caused by downed trees and electrical wires blocking streets and highways. During periods of extremely strong Santa Ana winds, major highways may require temporarily closure to truck and recreational vehicle traffic. Typically these disruptions are not long lasting, nor do they generally carry a severe long-term economic impact on the region.

Increased Fire Threat

Perhaps the greatest danger from in Southern California comes from the combination of the always present threat of wild fires and the drying hot Santa Ana winds that occur every few years in the urban/wildland interface. With the Santa Ana winds driving the flames, the speed and reach of the wild fires is much greater than in times of calm wind conditions. The higher fire hazard raised by Santa Ana wind conditions requires that even more care and attention be paid to proper brush clearances on property in the wildland/urban interface areas.

Losses

Losses from damage caused by windstorms are generally limited to isolated property such as roofs or tree damage. There are no areas of specific risk in Los Angeles County. Losses are seldom significant in the County.

Existing Mitigation

As stated, one of the most common problems associated with windstorms are power outages. High winds may cause trees to bend, sag, or break (tree limbs or entire trees). They may come in contact with nearby electrical distribution power lines. Fallen trees can cause short-circuiting and conductor overloading. Wind induced damage to the power system may cut power to customers, be costly to repair, and in some cases cause wild land fires.

California Code

One of the strongest and most widespread existing mitigation strategies pertains to tree clearance. Currently, California State Law requires utility companies to maintain specific clearances – depending on the type of voltage running through the line – between electrical power lines and all vegetation.

The following California Public Resource Code Sections establish tree pruning regulations:

- 4293: Power Line Clearance Required
- 4292: Power Line Hazard Reduction
- 4291: Reduction of Fire Hazards Around Buildings
- 4171: Public Nuisances

The following pertain to tree pruning regulations and are taken from the California Code of Regulations:

- Title 14: Minimum Clearance Provisions • Sections 1250-1258
- General Industry Safety Orders
- Title 8: Group 3: Articles 12, 13, 36, 37, 38
- California Penal Code Section 385

The following California Public Utilities Commission section has additional guidance:

- California Public Utilities Commission • General Order 95: Rule 35

Failure to allow a utility company to comply with the law can result in liability to the homeowner for damages or injuries resulting from a vegetation hazard. Many insurance companies do not cover this type of damage if the policy owner has refused to allow the hazard to be eliminated. The power companies, in compliance with the above regulations, collect data about tree failures and their impact on power lines. This mitigation strategy assists the power company in preventing future tree failure.

El Niño

> On February 9, 1998, President Clinton, in response to a request from Governor Wilson, declared a major disaster for 27 counties in the State of California. The disaster was designated as FEMA-1203-DR-CA. On February 13, 1998 four additional counties were added; on February 26, four more counties were added, and on March 6, 1998, six additional counties were designated, bringing the total to 41.

The County of Los Angeles established a special task force comprised of county department members to distribute sandbags and clear flood channels. In Monterey County, farmers and landowners along the Salinas River banded together to reduce flooding that caused $240 million in damages in 1995. They formed a coalition and spent $2 million to clean out vegetation, sandbars, and other flow impediments along 40 miles of the river, and increased water flow capacity by 33 percent. As a result, the Salinas River did not flood during the El Nino '98 Storms. In anticipation of El Nino-driven pounding surf and high tides, City and Orange County crews built, along the beach, a 10-foot high berm several hundred yards long to protect scores of beach-front homes in the City of Seal Beach.

The National Flood Insurance Program reported a surge in Californians purchasing flood insurance following the El Nino Community Preparedness Summit held in October, 1997. The number of policies went from a pre-summit total of 264,914 to 333, 753 by the end of November. This number climbed to 365,000 by the end of December according to FEMA.

Disasters have unique and defining characteristics. The El Nino '98 Storms are no exception. The most distinct characteristic of FEMA-1203-DR-CA has been the landslides, coastal erosion, and related earth movement problems brought on by rapidly recurring storms which produce heavy rains, high winds, and large waves.

Overview of FEMA-1203-DR-CA

Disaster Declaration

On February 9, 1998, President Clinton signed a major disaster declaration that designated "El Nino '98, FEMA-1203-DR-CA." As a result of the Presidential declaration, section of the Robert T. Stafford Disaster Relief and Emergency Assistance Act were implemented, providing Individual Assistance and Public Assistance to the designated counties. The declaration also activated the Hazard Mitigation Grant Program (HMGP) which is applicable to all counties in the State. After the initial declaration by President Clinton, 14 additional counties requested to receive a federal declaration, bringing the total number of designated counties to 41.

The 41 designated counties were: Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Nor6te, Fresno, Glenn, Humboldt, Kern, Lake, **Los Angeles**, Marin, Mendocino, Merced, Monterey, Napa, Orange, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Sutter, Tahema, Trinity, Tulare, Ventura, Yolo, Yuba.

El Nino '98

In the spring of 1997, Pacific Ocean temperatures along the equator from South America to Australia were rising above normal, changing wind patterns in the area. This is phenomenon known as El Nino. As part of the global impact of El Nino, heavy storms for 1997-1998 were predicted for the State of California.

In anticipation of a serious El Nino winter season, emergency services agencies throughout the State started making preparations. During summit convened on October 6, 1997, Governor Pete Wilson directed the State to take a series of actions in to prepare for the severe storms that were predicted to hit California as a result of El Nino. The Governor directed the Office of Emergency Services (OES) and the Department of Water Resources (DWR) to conduct a series of regional briefings over the next two months to assist local communities in their El Nino preparations. In October 1997, the first of six briefings for local and state agencies

was held. FEMA held the "El Nino Community Preparedness Summit" in Santa Monica, on October 14, 1997

Agencies such as DWR and the Corps of Engineers accelerated efforts to complete projects and work which began as a result of the prior year's disastrous flooding. Many local agencies accelerated repairs, cleaned storm channels, and implemented community education efforts, while the State issued environmental permits that allowed repair and mitigation work to move forward prior to the arrival of the storms. Although difficult to quantify, it is clear that without these and a multitude of other efforts, the devastation from the disaster would have been far greater.

About 170% of normal precipitation was experienced in most areas, with several locations receiving 300% or more above normal. Rainstorms occurred continuously in February, ranging in duration from 1 to 3 days, with only a day of rest between cycles. The season's most severe storm occurred on February 2nd, and a series of storms continued until February 24, 1998. A strong jet stream was present across the Pacific during this time and this colder air mass also increased rain and snow. February rains were three times normal, and the mountain snow pack rose from 15% to 185%. The pattern was similar to the winter of 1982-83, the most serious past El Nino year. The El Nino '98 Storms were of average temperature --unlike those of 1997, which were warmer, resulting in rainfall at higher elevations.

Description of Damage and Impact

Damage occurred almost as soon as the first heavy rains began in November, 1997. In Orange County, the damage became serious enough for a local disaster declaration on December 6, 1997. This was followed by a gubernatorial disaster declaration on December 10, 1997.

Casualties included 17 confirmed deaths and 29 confirmed injuries. The total amount of residential damage was estimated at over $120 million. Roads, utilities, and levees were also damaged. As of April 29, 1998, the Disaster Field Office (DFO) estimated damages as follows: 91 homes have been destroyed, 2,303 homes suffered major damages, and 4,252 homes incurred minor damage.

According to the California Coastal Commission, *Storm Summary Report for Coastal California, March 10, 1998,* the El Nino '98 Storms caused extensive damage along Coastal California. In many cases, coastal bluff and mountain soils lost stability due to saturation from copious precipitation and large waves. High river levels caused flooding of several low elevation areas. There was a great deal of beach erosion in Los Angeles, Orange, and San Mateo Counties, as well as other parts of California. Storm waves damaged many low-lying oceanfront structures. The Coastal Commission issued approximately 75 emergency coastal permits, mostly for rip rap and seawall repairs to protect residential structures.

Impacts to Individuals

By April 28, 1998, FEMA's Human Services Division had received over 70,125 tele-registrations for FEMA disaster assistance. The Disaster Housing Program had received a total of 46,730 applications, and had provided $20.6 million in assistance. As of April 15th the Small Business Administration (SBA) had issued 31,509 home and personal property loan applications and had approved more than $16 million in low interest loans. In addition, the SBA had issued 9,699 business loan applications and approved $6,504,400 in business loan funds. The Individual and Family Grant Program (IFGP) had received 37,093 requests as of April 28th. For serious, unmet needs beyond the maximum IFGP award, the State Supplemental

Grant (SSG) could provide up to an additional $10,000, and had awarded 17 grants for an additional $82,663 in aid to individuals. The Public Assistance (Infrastructure) Program had received 269 Damage Survey Reports (DSRs) totaling $26,582,560 as of April 28, 1998. According to the preliminary damage assessment, damage to local government facilities was estimated at $300 million.

Shelters

The El Nino '98 Storms created a need to feed and shelter thousands of people. The American Red Cross (ARC), members of the National Volunteer Organizations Active in Disaster (NVOAD), and numerous other voluntary agencies, are usually the first to respond to the needs of disaster victims. The Red Cross provided housing for 5,112 people at 91 shelter locations, more than 140,000 meals were served, and financial assistance was extended to more than 2,300 households. The Red Cross relief efforts for the El Nino winter storms exceeded $4.6 million.

Levees

Unlike the flooding in the previous year (FEMA-1155-DR-CA), California Winter Storms of 1997), there were less widespread floods and levee problems. Due in part top the lower temperatures, the duration of rains, and pre-storm repair efforts to shore-up levees at risk, there were only a few levee breaks and seepage. According to DWR, The Sacramento River was not strained to capacity. The San Joaquin River briefly approached flood stage at the Vernalis Gage, but did not exceed it. Many of the areas that flooded were predictable, such as Rio Linda in Sacramento County and the residential areas along the Pajaro River in Monterey County. The area around Clear Lake in Lake County repeated its flooding history, and set a record for the stage height. The Russian River at Guerneville was above flood stage, as was the Petaluma River.

Landslides

Landslides and debris flows had a greater impact during this disaster than in the federal disasters of 1995 and 1997. The severity of the problems ranged from the catastrophic losses in the Rio Nido community of Sonoma County, to small erosion problems with minor impact. Landslides and erosion also caused residential damage and destruction in Alameda County, Humboldt County, Los Angeles County, San Mateo County, San Francisco County, Santa Cruz County, Ventura County, and various other sites within the state.

Geological Discussion

The frequent storms that occurred in February 1998 saturated soils and triggered numerous debris flows and landslides, resulting in severe damage throughout river valleys and coastal areas. Eroding cliffs jeopardized homes, and debris flows forced many residents to evacuate their homes. Such headline grabbing events focused attention on the geologic problems produced by the wet season. It should be noted, however, that deep-seated landslide movements could continue after the heavy rains have stopped.

Soil and rock that comprises hill slopes will eventually move downhill. Some of this material will move grain-by-grain thorough erosion and soil creep, and some will move as larger slabs or liquefied masses, commonly called landslides and mudslides. Geologists generally classify landslides on their shape, rate (speed) of movement, type of motion, and material properties. In most classification schemes, there are three distinct types of movement: flow (e.g. debris

flows and mudflows); sliding along a discrete plane or failure (e.g. debris slide); and falling (e.g. rock falls and avalanches).

Landslides can be small, involving only a few cubic yards of material, or large, involving more than a square mile of land. Some landslides are shallow, only a few feet deep, while others can be hundreds of feet deep. Landslides can be slow, and move only a few inches a year. It can also be fast and move at tens to hundred of miles per hour.

While most hill slopes are marginally stable under dry conditions, the addition of water from rainfall, snowmelt, or human activities (e.g. watering lawns) can radically alter the character of the soil and weathered rock and lessen the stability of slopes. Generally, all other conditions being equal, if groundwater is at or near the ground surface, there is a great probability that a landslide or debris flow will occur.

Another major factor that may trigger landslides is sudden changes in the shape of the slope. Slope changes that may trigger landslides include, but are not limited to, man-made cuts and fills, undermining of slopes by stream erosion or formation of gullies, or undermining and overloading of slopes due to landslide movement on adjacent land. In fact, landslide movement in one part of a hill slope can radically affect the stability of adjacent slopes. Events at Rio Nido in Sonoma County illustrate how complex the changes in stability can be. In simplified terms, the Rio Nido landslide began when a block of soil and rock, high on a ridge, rotated down and out on the slope. This movement pushed a bulge of material onto the existing steep slope at the toe of the landslide. Fissures opened at both the top of the rotational block and within the toe of the landslide. The rotational movement of the landslide also undermines up-slope areas (decreasing stability), changing the groundwater flow patterns (increasing stability in parts of the slide while decreasing stability in other). Because the toe of the landslide was no longer supported by the surrounding slope (the slope became overly steep), the saturated outside edge failed by toppling and breaking apart. This loose material then mobilized as debris flow down a stream channel, picking up additional debris, including sediment and trees, as it flowed toward the houses on the canyon flow below. Immediate concerns were that the landslide mass would continue to move high on the slope, and as it did, the entire mass would break apart and fail as a massive debris flow that would inundate a much larger down slope area. Currently, the rotational component of the Rio Nido landslide has not shifted since monitoring equipment was installed two weeks after the failure began.

Hillsides may also be more vulnerable to debris flows following wildfires. Removal of vegetation generally makes hillsides more susceptible to erosion and landslides. After a forest fire there is reduction in the amount of vegetation on the hillsides to hold the soil in place. Also, the roots decay over a period of years following the fire. This results in an increased landslide hazard for 3 to 5 years following a large fire. In 1997, Southern California had 27 wildfires greater than 300 acres. At least 22 of those sites had some erosion damage in 1987, and it came in the form of debris flows and minor flooding.

There is evidence to suggest that most landslides and debris flows occur where they have happened in the past. For example, the Rio Nido landslide is next to an existing landslide deposit identified on a CA Division of Mines and Geology (DMG) map.

Though landslides are fairly common in California's hillside areas, there is considerable pressure to construct new homes at these locations. Some communities require site-specific investigations prior to permitting development. Engineers attempt to stabilize slopes by providing drainage, flattening slopes, and filing-in valleys. Sometimes, these modified slopes and fills require maintenance and while many of these modified slopes could last decades,

some failures occur. This is what happened to houses in Laguna Niguel, Orange County, which were built on an engineered slope that had shown signs of distress for three years.

Just as there is pressure to develop hill slope areas, the beautiful ocean views from sea cliffs make them desirable places to live. During the recent disaster, accelerated cliff erosion in Pacifica resulted from slightly higher than normal seasonal ground water infiltration. When the ground becomes saturated, wave action can more easily remove materials that have fallen to the bottom of the cliffs, temporarily accelerating cliff retreat in the areas up slope. The rocks in these particular cliffs are highly fractured and nonresistant. They include sandstone, shale, and metamorphic rocks that are prone to rapid erosion during the rainy season. Erosion usually has occurred episodically, not continually at the same time. This year the cliffs locally eroded as much as 10 feet, compared to the frequently noted annual averages of 3 to 4 inches.

Technological & Human-caused Hazards (Listed in alphabetical order)

Dam Failure

Dam Failure was rated a LOW PRIORITY HAZARD in the City of Paramount.

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 two major dams which could have significant impact on the City of Paramount in the event of a dam failure are the Whittier Narrows and Hansen Dams. Neither of these dams is 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.

Whittier Narrows Dam

Description and Location: Whittier Narrows Dam is owned and operated by the Los Angeles District, Corps of Engineers. It is located in Los Angeles County on the San Gabriel and Rio Hondo Rivers approximately three miles south of the City of El Monte, 3 miles northwest of the City of Whittier, and approximately 7.5 miles downstream of the Santa Fe flood control channel. It is normally empty except during or immediately after periods of significant runoff.

Areas of Inundation: Should a breach in the dam occur, the water released would flow in a southerly direction toward the City of Long Beach. The entire City of Paramount lies within the dam's flood plain/inundation path. Paramount is located approximately 11 miles downstream of the Whittier Narrows Dam. In the event of a dam failure, the flood wave would reach the City approximately 11-15 hours later at a depth of 4 feet, the City first and then continuing southward. It should be understood that the City would not be simultaneously inundated. The inundated area affected by a breach of the Whittier Narrows Dam is comprised of commercial, industrial, schools, and residential, including a hospital.

Hansen Dam

Description and Location: Hansen Dam is owned and operated by the Los Angeles District, Corps of Engineers. It is located in Los Angeles County on the northern edge of the San Fernando Valley on Tujunga Wash just below the confluence of Big and Little Tujunga Creeks, about 4 miles west of the town of Sunland. Hansen Dam operates as a "dry" dam with all gates open 1-foot.

Areas of Inundation: Should a breach in the dam occur, the downstream current of water would flow in a southerly direction, into the Los Angeles River Channel. The City of Paramount, excluding areas on the very eastern part of the City, lies within the dam's inundation path. Paramount is located

approximately 30 miles downstream of the Hansen Dam. In the event of a dam failure, the flood wave would reach Paramount approximately 22 hours later at a depth of one foot. The flood wave would continue to move through Paramount, inundating the northern section of the City first and then continuing southward. The most eastern portion of the City north of Alondra Boulevard and west of Lakewood Boulevard is not within the inundation area. It should be understood that the City would not be simultaneously inundated. The inundated area affected by a breach of the Hansen Dam is comprised of commercial, industrial, schools, and residential, including a hospital.

Data & Telecommunications Loss

Data & Telecommunication Loss was rated a MODERATE PRIORITY HAZARD in the City of Paramount.

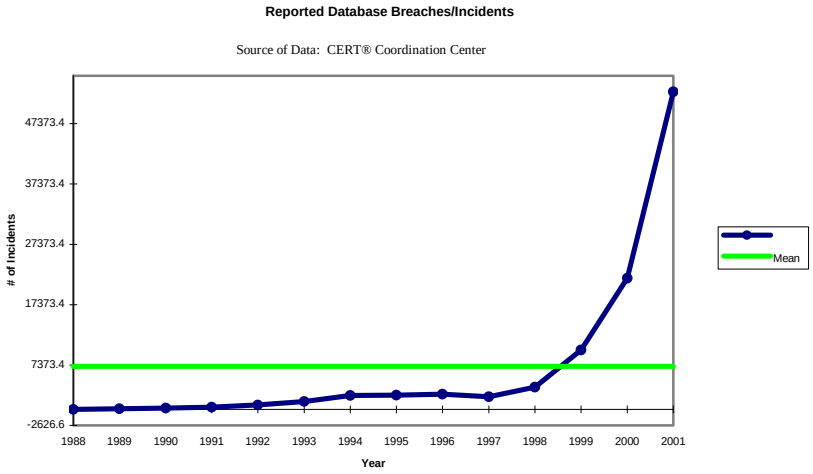
Impact:The City of Paramount depends upon information systems and communications networks to carry out nearly all aspects of day to day business. In this digital era, as we use automated information technology (IT) systems to process information for better support of our missions, risk management plays a critical role in protecting an our information assets, and therefore our missions, from IT-related risk.

An effective risk management process is an important component of a successful IT security program. The principal goal of an organization's risk management process should be to protect the *organization and its ability to perform their mission*, not just its IT assets. Therefore, the risk management process should not be treated primarily as a technical function carried out by the IT experts who operate and manage the IT system, but as an essential management function of the organization.

Computer Security Breaches

Computer breach incidents have risen sharply since the 1980s. These include viruses, worms, Trojan horses, break–ins, and other damaging breaches. Whereas only six incidents were reported in 1988, the number rose gradually during the late 1980s and 1990s, they made a sharp rise beginning in 1998, and have risen exponentially since. To date, there have been over 142, 500 computer breaches.

The 2002 Computer Security Institute (CSI) Computer Crime and Security Survey revealed that each year, over half of all databases have some kind of breach and that the average breach amounts to nearly $4 million in losses. This percentage is staggeringly high given that these are the security problems that companies are reporting. Organizations don't want to advertise the fact that their internal people have access to customer data, can steal that data, cover their tracks, give the data to anybody and stay undetected and employed while a crime is committed.



California recently enacted a law mandating the public disclosure of computer security breaches involving confidential information. The law covers not just state agencies but all private enterprises doing business in California. Starting July 1, 2003, any entity that fails to disclose that a breach has occurred could be liable for civil damages or face class action suits.

Cyber Crime

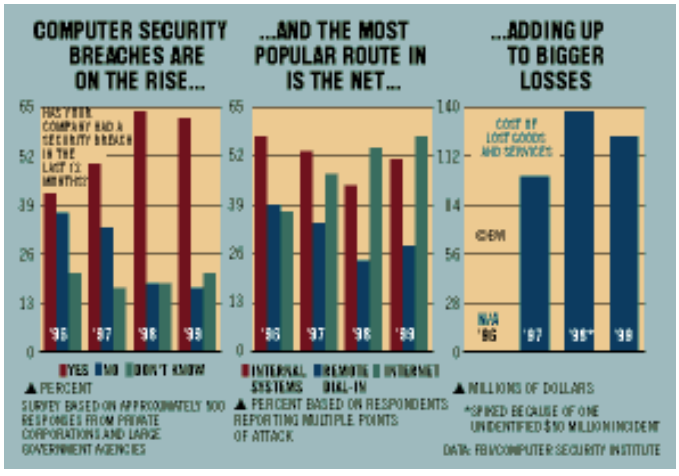
"…Cyber crime is becoming one of the Net's growth businesses. The recent spate of attacks that gummed up Web sites for hours--known as "denial of service"--is only one type. Today, criminals are doing everything from stealing intellectual property and committing fraud to unleashing viruses and committing acts of cyber terrorism in which political groups or unfriendly governments nab crucial information. Indeed, the tactic used to create mayhem in the past few days is actually one of the more innocuous ones. Cyber thieves have at their fingertips a dozen dangerous tools, from "scans" that ferret out weaknesses in Web site software programs to "sniffers" that snatch passwords. All told, the FBI estimates computer losses at up to $10 billion a year.

As grim as the security picture may appear today, it could actually get worse as broadband connections catch on. Then the Web will go from being the occasional dial-up service to being "always on," much as the phone is. That concept may be nirvana to e-tailers, but could pose a real danger to consumers if cyber crooks can come and go into their computer systems at will.

Says Bruce Schneier, chief technical officer at Counterpane Internet Security Inc. in San Jose, Calif.: "They'll keep knocking on doors until they find computers that aren't protected."

Sadly, the biggest threat is from within. Law enforcement officials estimate that up to 60% of break-ins are from employees. Take the experience of William C. Boni, a digital detective for PricewaterhouseCoopers in Los Angeles. Last year, he was called in by an entertainment company that was suspicious about an employee. The employee, it turns out, was under some financial pressure and had installed a program called Back Orifice on three of the company's servers. The program, which is widely available on the Internet, allowed him to take over those machines, gaining passwords and all the company's financial data. The employee was terminated before any damage could be done.

> The dirty little secret is that computer networks offer ready points of access for disgruntled employees, spies, thieves, sociopaths, and bored teens. Once they're in a corporate network, they can lift intellectual property, destroy data, sabotage operations, even subvert a particular deal or career. "Any business on the Internet is a target as far as I'm concerned," says Paul Field, a reformed hacker who is now a security consultant.



It's point and click, then stick 'em up. Interested in a little mayhem? Security experts estimate that there are 1,900 Web sites that offer the digital tools--for free--that will let people snoop, crash computers, hijack control of a machine, or retrieve a copy of every keystroke. Steve O'Brien, vice-president for information operation assessments at Info-Ops.com, an Annapolis (Md.)-based company that provides intrusion detection services and security solutions, says the number of ways to hack into computers is rising fast. He tracks potential threats both from hacker groups and from the proliferation of programs. Once a rare find, he now discovers at least three new nasty software programs or vulnerabilities every day. And those tools aren't just for the intellectually curious. "Anyone can get them off the Internet--just point and click away," says Robert N. Weaver, a Secret Service agent in charge of the New York Area Electronic Crimes Task Force.

Experts say the first step for companies is to secure their systems by searching for hacker programs that might be used in such attacks. They also suggest formal security policies that can be distributed to employees letting them know how often to change passwords or what to do in case of an attack. An added help: Constantly updating software with the latest versions and security patches. Down the road, techniques that can filter and trace malicious software sent over the Web may make it harder to knock businesses off the Net. Says Novell Inc. CEO Eric Schmidt: "Security is a race between the lock makers and the lock pickers." Regulators say that cybercrime thrives because people accord the Internet far more credibility than it deserves. "You can get a lot of good information from the Internet--95% of what you do there is bona fide," says G. Philip Rutledge, deputy chief counsel of the Pennsylvania Securities Commission. "Unfortunately, that creates openings for fraud."…"

Excerpts from "Business Week Online, Ira Sager in New York, with Steve Hamm and Neil Gross in New York, John Carey in Washington, D.C., and Robert D. Hof in San Mateo, Calif.

Top Ten Computer Security Breaches

Systems affected: All system and network devices

BIND weaknesses: The Berkeley Internet Name Domain (BIND) package is the most widely used implementation of Domain Name Service (DNS) by which we locate systems on the Internet by name, without having to know specific IP addresses. In a typical example of a BIND attack, intruders erase system logs, and install tools to gain administrative access. They then compile and install IRC utilities and network scanning tools, which are used to scan more than a dozen class-B networks in search of additional systems running vulnerable versions of BIND. In a matter of minutes, they can use the compromised system to attack hundreds of remote systems.

Systems affected: Multiple UNIX and Linux systems

Vulnerable CGI (Common Gateway Interface) programs and application extensions (e.g., ColdFusion) installed on Web servers: Most Web servers support CGI for data collection and verification. Intruders are known to have exploited vulnerable CGI programs to vandalize Web pages, steal credit card information, and set up back doors to enable future intrusions, even if the CGI programs are secured. As a general rule, sample programs should always be removed from production systems.

Systems affected: All Web servers

Remote procedure call (RPC) weaknesses: Remote procedure calls (RPC) allow programs on one computer to execute programs on a second computer. They are widely used to access network services such as shared files in NFS. There is compelling evidence that the vast majority of distributed

denial of service attacks launched during 1999 and early 2000 were executed by systems that had been victimized because they had RPC vulnerabilities. The broadly successful attack on US military systems during the Solar Sunrise incident also exploited an RPC flaw found on hundreds of Department of Defense systems.

Systems affected: Multiple UNIX and Linux systems

RDS security hole in Microsoft Internet Information Server (IIS): Programming flaws in Microsoft's Internet Information Server (IIS) used to host websites deployed on Microsoft Windows NT and Windows 2000 are employed by malicious users to run remote commands with administrator privileges. Some participants who developed the "Top Ten" list believe that exploits of other IIS flaws, such as .HTR files, are at least as common as exploits of RDS.

Systems affected: Microsoft Windows NT systems using Internet Information Server

Sendmail: Sendmail is the program that handles most e-mail on the Internet. It's widespread use makes it a prime target. In one of the most common exploits, the attacker sends a crafted mail message to the machine running Sendmail, and Sendmail reads the message as instructions requiring the victim machine to send its password file to the attacker's machine (or to another victim) where the passwords can be cracked.

Systems affected: Multiple UNIX and Linux systems

Sadmind and mountd: Sadmind allows remote administration access to Solaris systems, providing graphical access to system administration functions. Mountd controls and arbitrates access to NFS mounts on UNIX hosts. Buffer overflows in these applications can be exploited, allowing attackers to gain control with root access.

Systems affected: Multiple UNIX and Linux systems; Sadmind: Solaris machines only

Global file sharing and inappropriate information sharing via NetBIOS and Windows NT ports: These services allow file sharing over networks. When improperly configured, they can expose critical system files or give full file system access to hostile parties.

Systems affected: UNIX, Windows and Macintosh systems.

User IDs, especially root/administrator with no passwords or weak passwords: Some systems come with "demo" or "guest" accounts with no passwords or with widely-known default passwords. Service workers often leave maintenance accounts with no passwords, while some database management systems install administration accounts with default passwords. In addition, busy system administrators often select system passwords that are easily guessable ("love," "money," "wizard" are common) or just use a blank password. Many attackers try default passwords and then try to guess passwords before resorting to more sophisticated methods.

Systems affected: All systems.

IMAP and POP buffer overflow vulnerabilities or incorrect configuration: IMAP and POP are popular remote access mail protocols, allowing users to access their e-mail accounts. The "open access" nature of these services makes them especially vulnerable to exploitation because openings are

frequently left in firewalls to allow for external e-mail access. Attackers who exploit flaws in IMAP or POP often gain instant root-level control.

Systems affected: Multiple UNIX and Linux systems

Default SNMP community strings set to 'public' and 'private': The Simple Network Management Protocol (SNMP) is widely used by network administrators to monitor and administer all types of network-connected devices, ranging from routers to printers to computers. SNMP uses an unencrypted "community string" as its only authentication mechanism. Lack of encryption is bad enough, but the default community string used by the vast majority of SNMP devices is "public", with a few clever network equipment vendors changing the string to "private". Attackers can use this vulnerability in SNMP to reconfigure or shut down devices remotely.

Express Computer Business Weekly

Information Technology Security Practices

Computer Security Policy

The term *computer security policy* has more than one meaning. Policy is senior management's directives to create a computer security program, establish its goals, and assign responsibilities. The term policy is also used to refer to the specific security rules for particular systems. Additionally, policy may refer to entirely different matters, such as the specific managerial decisions setting an organization's e-mail privacy policy or fax security policy.

Program Management

Managing computer security at multiple levels brings many benefits. Each level contributes to the overall computer security program with different types of expertise, authority, and resources. In general, executive managers (such as those at the headquarters level) better understand the organization as a whole and have more authority. On the other hand, front-line managers (at the computer facility and applications levels) are more familiar with the specific requirements, both technical and procedural, and problems of the systems and the users. The levels of computer security program management should be complementary; each can help the other be more effective. Many organizations have at least two levels of computer security management; the *central* level and the *system* level.

Risk Management

Risk is the possibility of something adverse happening. Risk management is the process of assessing risk, taking steps to reduce risk to an acceptable level and maintaining that level of risk. Risk management requires the analysis of risk, relative to potential benefits, consideration of alternatives, and, finally, implementation of what management determines to be the best course of action. Risk management consists of two primary and one underlying activity; risk assessment and risk mitigation are the primary activities and uncertainty analysis is the underlying one. An organization should consider the following when assessing risks.

Life Cycle Planning

Security, like other aspects of an IT system, is best managed if planned for *throughout* the IT system life cycle. There are many models for the IT system life cycle but most contain five basic phases: initiation, development/acquisition, implementation, operation, and disposal.

Personnel/User Issues

Many important issues in computer security involve users, designers, implementors, and managers. A broad range of security issues relate to how these individuals interact with computers and the access and authorities they need to do their job. No IT system can be secured without properly addressing these security issues.

Preparing for Contingencies and Disasters

Contingency planning directly supports an organization's goal of continued operations. Organizations should practice contingency planning because it makes good business sense. Contingency planning addresses how to keep an organization's critical functions operating in the event of disruptions, both large and small. This broad perspective on contingency planning is based on the distribution of computer support throughout an organization. The following six steps describe the basic functions an organization should employ when developing contingency plans.

Computer Security Incident Handling

A computer security incident can result from a computer virus, other malicious code, or a system intruder, either an insider or an outsider. The definition of a computer security incident is somewhat flexible and may vary by organization and computing environment. An incident handling capability may be viewed as a component of contingency planning, because it provides the ability to react quickly and efficiently to disruptions in normal processing. Incident handling can be considered that portion of contingency planning that responds to malicious technical threats.

Awareness and Training

An effective computer security awareness and training program requires proper planning, implementation, maintenance, and periodic evaluation.

Security Considerations in Computer Support and Operations

Computer support and operations refers to system administration and tasks external to the system that support its operation (e.g., maintaining documentation). Failure to consider security as part of the support and operations of IT systems is, for many organizations, a significant weakness. Computer security system literature includes many examples of how organizations undermined their often expensive security measures because of poor documentation, no control of maintenance accounts, or other shoddy practices.

Physical and Environmental Security

Physical and environmental security controls are implemented to protect the facility housing system resources, the system resources themselves, and the facilities used to support their operation. An organization's physical and environmental security program should address the following seven topics. In doing so, it can help prevent interruptions in computer services, physical damage, unauthorized disclosure of information, loss of control over system integrity, and theft.

Identification and Authentication

Identification and Authentication is a critical building block of computer security since it is the basis for most types of access control and for establishing user accountability. Identification [6] and Authentication is a technical measure that prevents unauthorized people (or unauthorized processes) from entering an IT system. Access control usually requires that the system be able to identify and differentiate among users. For example, access control is often based on *least privilege*, which refers to the granting to users of only those accesses minimally required to perform their duties. User accountability requires the linking of activities on an IT system to specific individuals and, therefore, requires the system to identify users.

Logical Access Control

Access is the ability to do something with a computer resource (e.g., use, change, or view). Logical access controls are the system-based means by which the ability is explicitly enabled or restricted in some way. Logical access controls can prescribe not only who or what (e.g., in the case of a process) is to have access to a specific system resource but also the type of access that is permitted.

Audit Trails

Audit trails maintain a record of system activity by system or application processes and by user activity. In conjunction with appropriate tools and procedures, audit trails can provide a means to help accomplish *several* security-related objectives, including individual accountability, reconstruction of events, intrusion detection, and problem identification.

Cryptography

Cryptography is a branch of mathematics based on the transformation of data. It provides an important tool for protecting information and is used in many aspects of computer security. Cryptography is traditionally associated only with keeping data secret. However, modern cryptography can be used to provide many security services, such as electronic signatures and ensuring that data has not been modified. Several important issues should be considered when designing, implementing, and integrating cryptography in an IT system.

Economic Loss

Economic Loss was rated a MODERATE PRIORITY HAZARD in the City of Paramount

Impact:The City of Paramount Economic Development Element is not mandated by the State as a required General Plan Element. However, this General Plan builds upon a strong tradition of Economic Development that is underscored by the City's revitalization and redevelopment efforts. While this Element is not a required Element under the State of California planning law, though once adopted, the Element has the same standing as the other mandatory elements.

This Element addresses a range of issues germane to the economic well-being of the City. This Element is most closely linked to the Land Use Element is most closely linked to the Land Use Element that indicates the location and extent of permitted land uses throughout the City. The commercial component of the General Plan describes the nature of existing commercial development and the potential for additional commercial uses in Paramount.

Recommendations are also given to improve and increase the commercial development in order to better capture the potential within the City.

This Element considers both commercial and industrial development. Each economic sector is discussed in terms of issues, opportunities, and policies. There are a number of constraints with respect to commercial development that this Element seeks to rectify. These potential constraints include the following:

- Paramount captures far less than it's "fair share" of retail sales in particular categories when compared to the County and surrounding cities. Notable deficiencies are in Apparel, General Merchandise, Home Furnishings, Food, Auto, and Eating/Drinking establishments. Besides causing Paramount residents to travel long distances for these purchases, this pattern costs the City an estimated $53 million a year in taxable sales.

- The Paramount market area outside the City currently contains a large amount of high-quality regional commercial centers.

- Satisfactory sites for a community commercial center (15-30 acres with good arterial access, good visibility and suitable surroundings) will require redevelopment of existing commercial, residential or industrial property. Market potential for future development of this type appears limited in light of the current level of commercial redevelopment now completed or underway.

- Lack of parking in commercial strips causes congestion, reduces commercial productivity, and reduced arterial highway capacity.

- A low growth rate makes it difficult for commercial development expansion.

There are a number of opportunities related to commercial development in the City, including the following:

- Paramount has a total loss of taxable retail sales potential from its residents of approximately $53 million per year. Additional or improved commercial facilities could capture a share of this potential.

- Redevelopment has been used to upgrade the Central Business District and could be used for other commercial areas in the City.

- The Century Freeway has been completed since the last General Plan update and this Freeway will reduce congestion on arterials and improve access to potential commercial facilities in Paramount.

Policies

The policies included in this section will serve as the framework for the City's ongoing revitalization and economic development in the coming years. Specific programs that will implement the policies contained herein are identified in the implementation Program. The main commercial development issues include:

- How much commercial development can paramount reasonably accommodate?

- What type of commercial development is most suited to Paramount?

- What areas within the City have the greatest potential for commercial development?

Issue-Commercial Development

Paramount, especially retail trade, tends to be a follower of population rather than a generator of basic income. Commercial development grows with increasing population and with increasing income of the existing population. Commercial sites require good access, visibility, parking, internal pedestrian circulation, and shopper amenities.

- Economic Development Policy 1. The City will use commercial development to improve the image of the City for residents and business interests.

- Economic Development Policy 2. The City will promote shared parking in its commercial areas, where feasible.

- Economic Development Policy 3. The City will continue to promote and support revitalization of the commercial districts as a means to improve pedestrian circulation, parking capacity, and landscaping.

- Economic Development Policy 4. The City will encourage mixed use projects in key locations to provide additional market support and patronage of local businesses.

Issue-Industrial Development

Industry goals and objectives include the following:

- Economic Development Policy 5. The City will continue encouraging industry that provides jobs for the local labor force.

- Economic Development Policy 6. The City will encourage development of those businesses that will serve to support existing industry in Paramount.

- Economic Development Policy 7. The City will strive to retain sufficient effective rail access to adequately serve those businesses that require rail access.

- Economic Development Policy 8. The City will continue to attract industries with high sales tax generation and high assessed valuation.

- Economic Development Policy 9. The City will encourage new industrial redevelopment in large contiguous areas to avoid problems of incompatible uses and mixed uses.

Issue –Redevelopment

The following policies underscore the City's continued commitment to redevelopment and revitalization:

- Economic Development Policy 10. The City shall continue to utilize redevelopment to consolidate and redevelopment underutilized parcels.

- Economic Development Policy 11. The City will utilize design review to ensure compatibility between industrial and residential uses.

- Economic Development Policy 12. The City shall continue to improve the infrastructure in those areas that are deficient in infrastructure.

- Economic Development Policy 13. The City of Paramount will continue to promote economic development through the use of redevelopment.

- Economic Development Policy 14. The City of Paramount will strive to ensure that future development, supported in whole or part through redevelopment, is fiscally sound.

- Economic Development Policy 15. The City of Paramount will promote development that will benefit the community, as a whole, in terms of both jobs and revenue generation.

Economic Development Plan

A small community within a large developed area need not have its own economic base but may be specialized in residential, commercial or other uses. What uses developed depend on economic factors and City policy. The industrial core of Paramount is developed along the Union Pacific rail line for a variety of reasons, including the availability of land at prices industry was willing to pay, the availability of rail transport, the location of Paramount within the Los Angeles area, the availability of road transportation, a labor force, and favorable City policy.

Commercial Development

Commercial development provides property tax income to school districts without raising school costs. Commercial developments have additional costs for police and fire protection, street construction and maintenance, traffic control, and street lighting. Cities may also provide free public parking, street landscaping, and other services to commercial areas. Four basic types of commercial development can be identified. These are:

- Central Business District (CBD), where retail trade is combined with business and professional services, entertainment, etc, reinforced by the civic center and medical complex.

- Strip commercial development, consisting primarily of specialty stores where a trip is commonly made for a single purpose, and the store does not typically gain significantly from being located near other commercial establishments;

- General commercial centers, where a number of establishments gain from grouping together, providing a variety of services in a single location and providing parking and a variety of shopper amenities in common.

- Special commercial areas, which provide unique commercial activities not usually mixed with other uses.

Commercial centers are commonly classified by size and service area. Considerable data is available from existing centers to identify typical center service areas and populations. Center types include:

- Convenience Centers. The smallest type of center which may include a small grocery, liquor store, drugstore, Laundromat, etc., usually serving a population of 1, 000-10,000 people, who generally live within ¼ to ½ mile of the center.

- Neighborhood Center. A moderately sized center having as its principal tenant a supermarket or drug store (such as the Paramount Center at Alondra and Downey), typically serving 7,500-40,000 people.

- Community Center. A major center or combination of physically proximate commercial areas providing a wide range of consumer product sales and services, generally serving 40,000-150,000 people.

- Regional Center. The largest center type, including one or more full-line department stores and serving 150,000 or more people (Lakewood, Stonewood, Norwalk Square, Cerritos). In the absence of a distinct center, this function may be performed by two or more large scale commercial areas, which extend into regional market areas.

The area around Paramount is now well-supplied with regional shopping centers, and with only moderate population growth for the area forecast, little major center-building activity can be anticipated. However, it is quite possible that the substantially enhanced Central Business District will actually take on certain regional market characteristics.

Development of shopping centers must be based on careful analysis of existing development and growth and increasing income. Generally, in built-up areas commercial demand is accommodated by remodeling or reconstructing existing commercial structures.

Paramount has historically lost much potential sales tax income from retail sales categories of Apparel, General Merchandise, Home Furnishings, and others to surrounding cities. This fact, combined with the absence of community-scale retail centers in the Paramount area, indicates a potential for increasing Paramount's sales tax income through development of the Central Business District.

Industrial Development

Industry is the generating force behind all other economic activity. When an area loses jobs in its basic industries, many more jobs are lost in activities serving these basic processes. The area cannot provide for its population, and people move to other communities with more jobs until a balance is again achieved. Industry is commonly divided into basic or primary activities and secondary activities. Basic activities are those activities that bring income from outside the community and are crucial to the survival of a region as a whole.

Industry has both costs and benefits to the City, which should be considered in promoting and regulating industrial development. In particular, when industry is adjacent to residential areas, the relationship between the two must be carefully handled to preserve residential values. Industry's large

buildings, truck traffic, noises, and odors are incompatible with the activities and visual character of the residential environment.

Many factors are important in determining the viability of an area as an industrial location including the presence of existing industries that may be able to attract related industry, regional and local growth potential by sector, the availability of land, the cost of land, the labor supply, labor costs, location, competition, and the availability of support facilities.

Paramount offers a conducive environment for industrial firms. Some of the advantages the City offers are good highway access, closeness to suppliers, land costs, access to markets, reasonable development standards, and a cooperative City attitude.

At the present time, approximately 890 acres of land in paramount are zoned industrial. The majority of this land is in the central portion of the community, situated between the Southern California Edison line on the north, Paramount Boulevard on the east, and the City limits on the south.

Available land in Paramount ranges in size from 5, 000 square-foot lots to twenty-five acre parcels, most of which is available only through redevelopment.

City of Paramount General Plan – Economic Development Element

Explosions

Explosions was a HIGH PRIORITY RISK in the City of Paramount

Impact: The City does not have the expertise to measure the exact impact to the City. However, they recognize the potential to their citizens, infrastructure and transportation routes. Which would effect their ability to operate city day to day business and the citizens ability to carry out their day to day routines.

An explosion is a rapid release of stored energy characterized by a bright flash and an audible blast. Part of the energy is released as thermal radiation (flash); and part is coupled into the air as airblast and into the soil (ground) as ground shock, both as radially expanding shock waves.

To be explosive, the material:

Must contain a substance or mixture of substances that remains unchanged under ordinary conditions, but undergoes a fast chemical change upon stimulation.

- This reaction must yield gases whose volume—under normal pressure, but at the high temperature resulting from an explosion—is much greater than that of the original substance.

- The change must be exothermic in order to heat the products of the reaction and thus to increase their pressure.

Common types of explosions include construction blasting to break up rock or to demolish buildings and their foundations, and accidental explosions resulting from natural gas leaks or other chemical/explosive materials.

The rapid expansion of hot gases resulting from the detonation of an explosive charge gives rise to a compression wave called a **shock wave,** which propagates through the air. The front of the shock wave can be considered infinitely steep, for all practical purposes. That is, the time required for compression of the undisturbed air just ahead of the wave to full pressure just behind the wave is essentially zero.

If the explosive source is spherical, the resulting shock wave will be spherical. Since its surface is continually increasing, the energy per unit area continually decreases. Consequently, as the shock wave travels outward from the charge, the pressure in the front of the wave, called the **peak pressure**, steadily decreases. At great distances from the charge, the peak pressure is infinitesimal, and the wave can be treated as a sound wave.

Behind the shock wave front, the pressure in the wave decreases from its initial peak value. At some distance from the charge, the pressure behind the shock front falls to a value below that of the atmosphere and then rises again to a steady value equal to that of the atmosphere. The part of the shock wave in which the pressure is greater than that of the atmosphere is called the **positive phase**, and, immediately following it, the part in which the pressure is less than that of the atmosphere is called the **negative or suction phase**.

Conventional structures, in particular those above grade, are susceptible to damage from explosions, because the magnitudes of design loads are significantly lower than those produced by most explosions. The peak pressure in the blast pulse produced by 10 lb of TNT at a range of about 50’ is

approximately 2.4 psi (which is 348 psf!) with a duration of the positive phase of 7.7 ms. Conventional structures are not normally designed to resist blast loads.

Recent terrorist attacks demonstrate the types of damage that can be produced. The 1993 terrorist attack on the World Trade Center in New York City removed several thousand square feet of concrete floor slabs in the general area of the explosion and severely damaged several buildings' communication, transportation and utility systems. Due to the inherent redundancy of the steel frames, the structures did not collapse.

The 1995 attack on the Alfred P. Murrah Federal Building in Oklahoma City revealed the vulnerability of conventional structural designs when subjected to blast loads. When a source is located at street level, the blast shock wave acts up against the underside of the floor slabs at upper stories. Floor slabs are not designed for this magnitude and direction of load—for this direction of load, the reinforcement is in the wrong place.

Explosion Hazards

There are many potential explosion hazards in Los Angeles County. Catastrophic explosions could be caused by:

- Exotic Chemicals and Substances
- Natural Gas and Propane
- Methane Gas
- Gasoline and other liquid fuels
- Manufactured and Military Explosives

The origin of a catastrophic explosion may be:

- Stationary pressure vessels and tanks
- Rail tank cars
- Truck tanks
- Pipelines
- Cargo ships carrying explosive materials

Explosions can be triggered by:

- Manual of Accidental Detonation of Explosives
- Fire/Open Flame
- Electrical Discharge
- Chemical Interaction
- Radiological Reaction
- Faulty Containment
- Equipment Malfunctions

Explosion Consequences

A catastrophic explosion could challenge responders to deal with:

- Mass casualties
- Fires
- Building and property destruction
- Infrastructure failure (telecommunications, transportation, etc.)
- Lifeline interruption
- Chemical or radiation contamination
- Debris removal

Terrorism & Weapons of Mass Destruction (WMD)

Terrorism & Weapons of Mass Destruction was a HIGH PRIORITY HAZARD in the City of Paramount

Impact: Although Paramount does not have any hard targets within their boundaries. The potential of threat exists by geographical proximity to the City and County of Los Angeles, the Los Angeles Harbor, the Los Angeles Airport and other identified targets. The impact to the City of Paramount would be secondary effects to transportation, water/wastewater, biological fallout, etc.

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.

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

Civil Unrest

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.

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

The City of Paramount is bordered on all sides by other southeast cities, including Bellflower, Compton, Downey, Lynwood, and South Gate. Transportation routes used for normal traffic movements (streets, freeways, rail, etc.) are vulnerable and can also facilitate the movement of potential rioters.

National Security Emergency

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

The following is provided for information and planning purposes:

Air Burst

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

Surface Burst

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

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

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

Blast

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

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

Thermal Radiation

A burst of intense light and heat. This phenomenon can initiate fires as well as produce casualties. A one-megaton explosion can produce flash-blindness up to 13 miles on a clear day, or 53 miles on a clear night. Thermal radiation can cause skin and retinal burns many miles from the point of detonation. A one-megaton explosion can cause first-degree burns at distances of approximately 7 miles, second-degree burns at approximately 6 miles, and third- degree burns at approximately 5 miles from ground zero. Detonation of a single thermonuclear weapon could cause many thousands of burn casualties.

Initial Radiation

Defined as that radiation emitted during the first minute after detonation, it is comprised of gamma rays and neutrons. For large yield weapons, the range of the initial radiation is less than that of the lethal blast and thermal radiation effects. However, with respect to small yield weapons, the initial radiation may be the lethal effect with the greatest range.

Fallout

Produced by surface debris drawn into and irradiated by the fireball, then rising into the atmosphere and eventually returning to earth. When a nuclear detonation occurs, fission products and induced radioactive material from the weapon casing and debris that was pulled up into the fireball returns to earth as fallout. A source of ionizing radiation, fallout may be deposited miles from the point of detonation and thus affect people otherwise safe from the other effects of the weapon. The radiation danger associated with fallout decreases as the radioactive material decays. Decay rates range from several minutes to several years.

Electromagnetic Pulse (EMP)

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

The population at risk is 54,900 night-time residents and 50,742 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.

Transportation Accident/Incident

Transportation Accident/Incident was rated a HIGH PRIORITY HAZARD in the City of Paramount.

Impact; The potential impact to the City depending on the severity of the incident/accident could halt the City's day to day operation, which would have a sufficient impact on business and their economy.

Most of the City's industrial uses are located in the Central Industrial District, roughly bordered by Jackson Street to the south, Rosecrans Boulevard to the north, Vermont Avenue to the east, and Garfield Avenue to the west. Paramount Petroleum, an active petroleum refinery is located at 14700 Downey Avenue. Two large petroleum products distributors are Western Petroleum, located at 14066 Garfield Avenue, and Cool Fuel, located at 16300 Alondra Boulevard.

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.

Hazardous material incidents differ from other emergency response situations because of the wide diversity of causative factors and the pervasiveness of the potential threat. Circumstances such as the prevailing wind and geographic features in the vicinity of emergency incidents are relevant factors which may greatly increase the hazardous chemical dangers. Incidents may occur at fixed facilities where, most likely, the occupants have filed site specific emergency response contingency and evacuation plans. However incidents may also occur at any place along any land, water or air transportation routes, and (in event of vessel mishaps, aircraft accidents, misuse of agricultural chemicals and illegal dumping) may occur in unpredictable areas, relatively inaccessible by ground transportation.

In Paramount the vast majority of hazardous material incidents are handled prior to their becoming a major disaster. Nevertheless, the emergency organization needs to be flexible and evolutionary in its response to a developing incident. This plan is designed to accommodate both the large number of relatively routine minor spill incidents and the truly catastrophic hazardous material disaster.

The increasing volume and variety of hazardous materials that are generated, stored, or transported within the City of Paramount is a problem of great concern to public officials and the community. A major hazmat accident and/or spill could endanger the health and safety of untold numbers of men, women and children who may be within a mile of the accident scene. A number of freight trains crisscross through the City hauling various types of hazardous and explosive materials including chlorine gas and LPG natural gas. Several fixed site industrial firms require potentially hazardous materials to operate their businesses. In addition, there are numerous underground pipelines which carry flammable and hazardous liquids. Finally, commercial airliners overfly the City enroute to the Los Angeles International Airport which significantly increases the potential disaster threat.

Gas tanker trucks travel frequently on city streets around the intersection of Lakewood Boulevard and Somerset Boulevard, and Rosecrans Avenue, and Garfield Avenue, and Atlantic Place, and Atlantic Boulevard, exiting or arriving at petroleum distribution points.

The threat of a major hazardous material incident in Paramount exists from five different sources. These are commercial vehicles, rail and air transportation; pipeline; fixed facility; and clandestine dumping.

Rail

Transportation: Train Derailment

A major train derailment that occurs in a heavily populated industrial area 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 an industrial building or entering into normal street traffic.

Each of these hazards encompasses 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.

Transportation: Metro Rail Incident

The Metro Rail system is part of a multimodal transportation system developed by the Los Angeles County Transportation Authority (LACTA). The line is operated by the Metropolitan Transportation Authority (MTA).

The Metro Rail system consists of:

- **Metro Blue Line** - operates in and through the cities of Los Angeles, Compton, Carson and Long Beach. Estimated ridershipC28,000-35,000 on a typical workday, growing to 50,000 by the year 2000.

- **Metro Red Line** - the train will run underground from downtown Los Angeles west along the Wilshire Corridor and eventually continue into the North Hollywood area. It is still currently under construction and only a small portion is open.

- **Metro Green Line** - operates in and through the cities of Norwalk, Downey, South Gate, Paramount, Los Angeles, Hawthorne, Inglewood and El Segundo.

- **Metrolink** - Commuter train network which connects long-distance commuters from outlying communities to Union Station in downtown Los Angeles.

An emergency condition begins when an LACTA employee becomes aware of the condition and makes the necessary notification. The employee will contact Central Control and will remain on-scene until a Rail Transit Operations Supervisor (RTOS) arrives or until released by Central Control. Depending on the magnitude of the situation, the RTOS will act as the **On-Scene Coordinator** for the emergency response agencies or will release the train (if a train is involved) and handle any information needs relating to the situation.

Once everyone is safe and anyone needing medical attention is attended to, the first priority for the RTOS is to restore normal rail service. The RTOS will ask that power be restored if it has been removed and that the tracks are cleared of all vehicles and equipment. In a major incident the RTOS will work closely with the emergency response agencies to give any support or information needed. If one track can be cleared it is a priority to get that track open to service so that some train service can

resume. The RTOS will remain on-scene until the incident scene *is* released by the appropriate response agency.

NOTE: Evacuation of passengers from the trains, except in a dire emergency, must be with the Rail Controller's approval. The RTOS will monitor and remain in constant radio contact with the Rail Control Center at all times. Actual rescue of victims is the responsibility of the local Fire Department. On occasion, however, they may require assistance from transit system personnel equipment. This assistance shall be provided as requested. It is recognized that certain operations, such as lifting train cars and removing pinned victims, require specialized equipment and should only be done by trained LACTA personnel. Effective liaison between the Fire and/or Law Enforcement personnel in charge and the Accident Investigation Team is vital to avoid situations which may further endanger personnel or result in excessive damage to equipment.

The LACTA considers the following accidents/incidents as being major:

- Death.
- Collision of a train with a maintenance vehicle or alighting personnel from a train that requires medical attention.
- Mainline or yard derailments.
- Any accident/incident that requires evacuation of personnel.
- Fire or explosion on a train or Metro Rail Line facility or construction site.
- Collision between trains.
- Collision between trains and track or wayside equipment.
- Accident/incident involving a runaway train resulting in damage or injury.
- Accident/incident involving Mainline Interlockings.
- Chemical spills or uncontrolled release of a compressed gas or hazardous materials.
- Industrial injuries occurring at a Metro Rail Line Facility or construction site.

Although the Metro Blue Line was designed to withstand the effects of an earthquake, damage to the line may still occur. Additionally, an earthquake may trigger secondary events which can impact the transit system's ability to safely conduct revenue services. In the event of a major earthquake on the Newport-Inglewood Fault (magnitude 7.0 or greater), it is expected that the entire Metro Blue Line can expect to sustain significant damage and will probably close. Segments of the line are also subject to liquefaction.

Segments of the line from Long Beach to Del Amo Passenger Station and from Artesia Passenger Station to Slauson Passenger Station as well as segments of the line between Del Amo and Artesia Passenger Stations and from Slauson to the 7th and Flower Station are expected to sustain serious damage. Liquefaction is expected in Long Beach from First Street to Hill Street and from Imperial Highway to 103rd Street in Los Angeles.

There are also off-system hazards which may impact the system, including facilities that store or process hazardous materials, high voltage lines, petroleum pipelines and natural gas mains,

The Metro Green Line runs through the northern portion of the City of Paramount.

Highway Transportation

The greatest probability of a major hazmat incident is from a transportation accident. Interstate 710, the Long Beach Freeway, runs north-south on the western perimeter of the City. Heavy truck traffic travels to and from the Long Beach Harbor each day. It is safe to say that one or more of every 10 commercial vehicles is carrying hazardous materials.

There is one railroad train line, Union Pacific, that transverses the City of Paramount in two different areas. The first line runs from the southern perimeter to the northern perimeter. Another Union Pacific line transverses diagonally through the City from the southeast perimeter of the City to the northwest perimeter.

Trucking Incident

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.

The City of Paramount is located within the southeast section of Los Angeles County. It is served by four major freeways, and major north-south truck routes. Truck traffic is found on Somerset, Rosecrans, Alondra, and Garfield Boulevards. Approximately 1/3 of the City's land use is industrial, with a significant amount of warehousing and manufacturing space.

Pipelines

There are 18 major underground petroleum pipelines located in the City of Paramount.

Major Air Crash

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 controlled. Emergency medical care, food and temporary shelter will be required by injured or displaced persons. Many families may be separated, particularly if the crash occurs during working hours; and a locator system should be established at a location convenient to the public. Investigators from the National Transportation and Safety Board and the Los Angeles County Coroners Office will have short-term jurisdiction over the crash area and investigations will be completed before the area is released for clean up. The clean-up operation may consist of the removal of large debris, clearing of roadways, demolishing unsafe structures and towing of demolished vehicles.

It can be anticipated that the mental health needs of survivors and the surrounding residents will greatly increase due to the trauma associated with such a catastrophe. A coordinated response

team, comprised of mental health professionals, should take a proactive approach toward identifying and addressing mental health needs stemming from any traumatic disaster.

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.

The City of Paramount is located in the southeast 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 Interstate 105 of the north, State Highway 91 on the south, Interstate 710 on the west. The skies above Paramount are heavily occupied by aircraft originating and departing from a number of airports located in Southern California. The airports nearest to Paramount 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.

- **Compton Municipal Airport** - Compton Municipal Airport is a small airport that serves small private aircraft in the area. The airport is approximately five miles due west of the Paramount on Alondra Boulevard between Central Avenue and Wilmington Avenue.

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

Transportation Failure

Transportation Failure was rated a MODERATE PRIORITY HAZARD by the City of Paramount.

Impact: Transportation disruption and loss in and around Los Angeles County have the potential for catastrophic consequences on the populace. The area's heavy reliance on conveyances is a major factor in economic stability and survival during emergencies. Los Angeles County's transportation corridor interconnections link all parts of the county to neighboring jurisdictions and their stability and dependability is necessary to assure population health and welfare in an emergency. A catastrophic loss or extended disruption in any of the transportation forms listed below could have severe and long-lasting impacts on the area's economy and health.

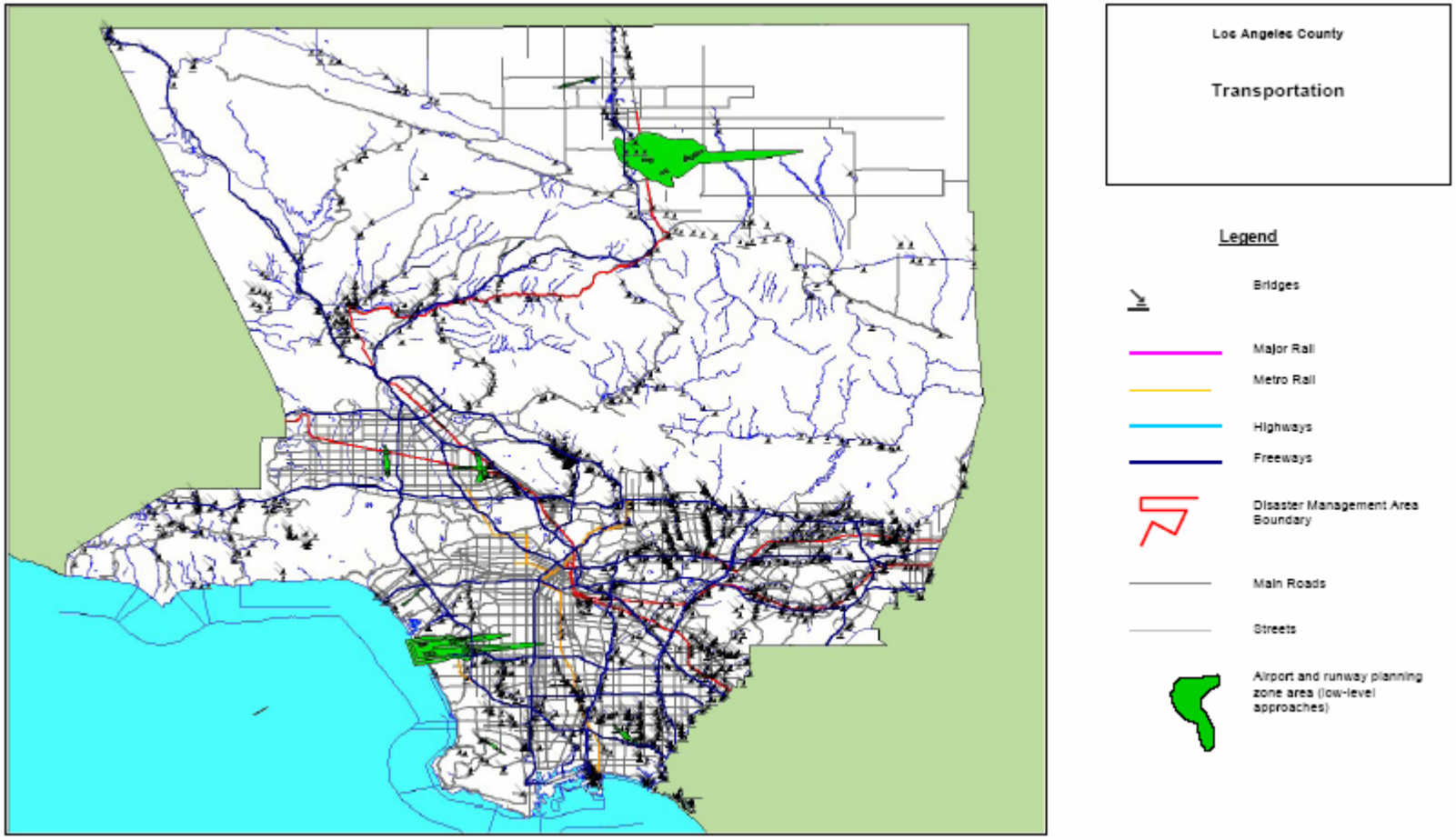
Roads, Road Miles, Motor Vehicles, & Drivers in L.A. County

- Los Angeles County has over 600 miles of freeway and 382 miles of conventional highway.
- On the average day, 92 million vehicle miles are driven in L.A. County.

Type of Vehicle Registrations	2000	1999	1998
Autos	5,134,168	4,935,605	4,825,512
Trucks	1,021,397	991,315	970,993
Trailers	283,402	283,402	262,506
Motorcycles	81,167	75,569	74,210
Total	6,520,134	6,290,976	6,133,221

Note: More than 600,000 cars are sold in Southern California every year, according to J.D. Powers & Associates of Agoura Hills and Calif. DMV

Los Angeles County Transportation Map Los Angeles County GIS Data



System	Ridership	Vehicles in Operation at Peak Weekday Usage	Year Founded	Contact (Telephone)
MTA* - Motor Bus	347,451,286	1,888	1958	1-800-COMMUTE TTY 1-800-252-9040 213-922-6000 (main)
MTA* - Street Car	25,669,552	51	1990	same as above
MTA* - Rapid Rail	19,612,940	58	1993	same as above
Long Beach Transit	26,255,487	151	1963	562-591-2301
Santa Monica's Big Blue Bus	22,057,734	134	1928	310-451-5444
Foothill Transit	16,273,000	259	1988	1-800-RIDE-INFO TTY (626) 967-3147
Montebello Transit	7,356,606	46	1930	323-887-4600
Southern California Regional Rail Authority (MetroLink)	6,978,588	133	1992	1-800-371-LINK TTY 1-800-698-4TDD
Gardena Municipal Bus Lines	6,136,864	39	1940	(800) 266-6883 Maps & Schedules: (323) 321-0165
Culver City Transit	4,525,307	27	1928	310-253-6500 TTY 310-253-6548
System	**Ridership**	**Vehicles in Operation at Peak Weekday Usage**	**Year Founded**	**Contact (Telephone)**
Torrance Transit	4,509,300	43	1940	1-800-266-6883
Antelope Valley Transit Authority	2,216,090	36	1992	661-945-9445 ext. 200
Santa Clarita Transit	2,321,035	48	1991	661-294-1287
Norwalk Transit	1,434,335	15	1974	562-929-5550
Los Angeles Department of Transportation (LADOT) (Commuter Express; Community Connection; DASH)	3,356943	88	1976	(213, 310, 323 or 818) 808-2273 TTY 1-800-252-9040
Commerce Municipal Bus Lines	957,405	6	1960	323-887-4419
DowneyLINK Public Transit Service	306,308	6	1994	562-904-5465
Palos Verdes Transit Authority	123,322	13	1995	310-544-7108
Cerritos on Wheels (COW)	n/a	n/a	n/a	562-928-4COW

Los Angeles County Metropolitan Transportation Authority (MTA) uses its subway system and fleet of about 2,400 buses to move about 400 million passengers each year. It supports about 16 municipal bus operators. The MTA also operates a rail system that spans about 75 miles and incorporates more than 60 stations. It operates a light rail that runs between LA and Pasadena. Other MTA activities include funding community projects like bikeways, pedestrian facilities, and local road and highway improvements.

METRO BLUE LINE (Above ground)

22 miles and 22 stations
Downtown Los Angeles to Long Beach
Opened July 1990
Cost: $877 million
69 cars in fleet
74,406 average weekday boardings, 49,871 average weekend boardings (daily average, FY 2003)
22.16 million* total passenger boardings in FY 2003

METRO GREEN LINE (Above ground)

20 miles and 14 stations
El Segundo to Norwalk
Opened 1995
Cost: $714 million
34 cars in fleet
35,847 average weekday boardings, 17,655 average weekend boardings (daily average, FY 2003)
9.92 million* total passenger boardings in FY 2003

METRO RED LINE (Subway)

17.4 miles** and 16 stations
Union Station to the Wilshire corridor
Union Station through Hollywood to North Hollywood
Segment One opened 1993 (Wilshire/Western Segment Opened 1996; Hollywood Segment Opened 1999; North Hollywood Segment Opened 2000)
Cost: $4.5 billion
104 cars in fleet
112,021 average weekday boardings, 76,395 average weekend boardings (daily average, FY 2003)
31.46 million* total passenger boardings in FY 2003

** Includes yards and maintenance areas

METRO GOLD LINE (Above ground)

13.7 miles and 13 stations
Union Station to Sierra Madre Villa in East Pasadena
Opened July 2003
Cost: estimated at $859 million
26 Cars in fleet
14,573 average weekday boardings , 12,130 average weekend boardings

Rail

Rail Roads Operating in Los Angeles County In 1995, Burlington Northern merged with the Atchinson Topeka & Santa Fe Railway to form Burlington Northern & Santa Fe Railway. The following year, Southern Pacific Lines was acquired by Union Pacific Railroad.

Amtrak	Passengers	Union Station, 800 N Alameda St, LA 90012; (800) 872-7245
Metrolink (*Southern California Regional Rail Authority*)	Passengers	700 S Flower St, Ste 2600, Los Angeles 90017; (800) 371-LINK
Burlington Northern & Santa Fe Railway	Freight	3770 E 26th St, Los Angeles 90023 (323) 267-4140
Los Angeles Junction Railway (*owned by Burlington Northern Santa Fe Railway*)	Freight	4433 Exchange Ave, Los Angeles 90058 (323) 277-2001
Union Pacific Railroad Company	Freight	13181 Crossroads Parkway North #500, City of Industry 91746 (626) 935-7602

Daily Truck & Train Movements to/from Los Angeles/Long Beach Harbor 1990, 2000 & Projections

Year	Truck Movements	Train Movements
1990	20,000	30
2000	25,000	50
2010	33,000	70
2020	50,000	100

Alameda Corridor Project

It is estimated that Los Angeles and Long Beach harbors will have double the current volume of incoming ocean freight traffic by the year 2020. The Alameda Corridor Project, started in 1997, was planned to divert much of this traffic from local freeways and street-level railroad crossings and provide, by the year 2002, a 20-mile express rail link between the Los Angeles and Long Beach harbors and the rail yards in Vernon. The $2.4 billion project will consolidate the operations of the Union Pacific and Burlington Northern Santa Fe railroads. Street level railroad crossings along Alameda Street will be eliminated and half of the route will run below street level. The project is under the direction of the Alameda Corridor Transportation Authority.

Route	Major Stops
Coast Starlight	Los Angeles-San Jose-Oakland-Sacramento-Portland-Seattle
Pacific Surfliner	San Diego-Anaheim-Los Angeles-Ventura-Santa Barbara-San Luis Obispo
Southwest Chief	Los Angeles-Flagstaff-Albuquerque-Topeka-Kansas City-Chicago
Sunset Limited	Los Angeles-Tucson-El Paso-San Antonio-Houston-New Orleans-Mobile-Jacksonville-Orlando, Florida

Air Transportation

Airport/Airfield	Location
Agua Dulce Airpark	Agua Dulce Canyon Rd, Saugus
Brackett Field (POC)	1615 McKinley Av, La Verne 91750 (909) 593-1395
Brian Ranch	Palmdale
Burbank-Glendale-Pasadena (Bob Hope) (BUR)	2627 N Hollywood Way, Burbank
Catalina (AVX)	Avalon
Catalina Air & Sea Terminal	Berth 95, San Pedro
Compton (CPM)	901 W Alondra Blvd, Compton 90220 (310) 631-8140
El Monte Airport (EMT)	4233 Santa Anita Av, El Monte 91731 (626) 448-6129
General William J. Fox Airfield (WJF)	4555 W Avenue G, Lancaster 93536 (661) 940-1709
Goodyear Blimp Base	19200 S Main St, Carson
Hawthorne Municipal (Jack Northrop Field) (HHR)	12101 Crenshaw Av, Hawthorne
Long Beach Airport (Daugherty Field) (LGB)	4100 Donald Douglas Dr, Long Beach
Los Angeles International Airport (LAX)	World Way, Los Angeles
Palmdale Regional Airport	39516 N 20th St E, Palmdale 93550 (661) 266-7602
Palmdale Production Flight/Test Installation Plant 42	Palmdale
Santa Monica Municipal (SMO)	3200 Airport Dr, Santa Monica
Torrance Municipal (Zamperini Field) (TOA)	3115 Airport Dr, Torrance
Van Nuys (VNY)	16461 Sherman Way, Van Nuys
Whiteman Airport (WHP)	12653 Osborn St, Pacoima 91331 (818) 896-5271

Passenger Traffic Totals - Arriving & Departing, 1991-2000

Year	Total	Departing	Arriving
2000	67,303,182	33,836,077	33,467,105
1999	64,279,571	32,298,944	31,980,627
1998	61,215,712	30,826,859	30,388,853
1997	60,142,588	30,313,688	29,828,900
1996	57,974,559	29,162,942	28,811,617
1995	53,909,223	27,234,353	26,674,870
1994	51,050,275	25,812,087	25,238,188
1993	47,844,794	24,141,068	23,703,726
1992	46,964,555	23,732,371	23,232,184
1991	45,668,204	22,954,976	22,713,228

Maritime Transportation

Major Ports

Port of Los Angeles
425 S Palos Verdes St
San Pedro 90733

Port of Long Beach
925 Harbor Plaza
Long Beach 90801

State and Local Stakeholders

Ports and waterways stimulate economic development, which in turn benefits state and local economies. In 1994, U.S. port activities contributed more than $780 billion to the gross domestic product. Port activities also resulted in tax payments of $56 billion to state and local governments (Maritime Administration, 1994). Successful ports attract a wide variety of support businesses, such as container manufacturers, stevedore companies, ship chandlers, customhouse brokers, and freight forwarders. These support groups, in turn, become stakeholders in the continued success of the port.

States also have an interest in effective port administration and operation. In addition to collecting taxes from businesses that depend on port activity, states have a political interest in promoting safety and sound environmental practices.

Public and Community Stakeholders

Throughout U.S. history, efficient water transportation has stimulated economic growth. It is no accident that the top ports in terms of tonnage are located in densely populated areas. New York, Los Angeles, Houston, and Philadelphia are cases in point. History has proven that population density and economic prosperity are often brought about by the presence of a port.

One of the most important public benefits generated by ports is job creation. In 1992, more than 1.5 million people were employed directly by the port industry; another 14 million were employed by port users and suppliers. That same year, port activities generated $523 billion in personal income (Maritime Administration, 1994). These workers have a significant stake in the port industry.

Ports and waterways also provide significant aesthetic and recreational opportunities, which are highly valued by the public today. These activities are fostered by environmental protection, one of the most significant public issues shaping the economic and political landscape today. In response to public demands, federal and state governments have imposed numerous environmental laws and regulations in recent years. Logistics and transportation professionals, as well as architects and operators of ports and waterways, must comply with a growing catalog of environmental restrictions in order to survive. Technological advances that reduce the incidence of oil spills are in keeping with the public interest in protecting the environment.

Utility Loss

Utility Loss was rated a HIGH PROIRITY HAZARD in the City of Paramount

Impact is itemized below:

The 2000-2001 California electricity crisis brought to light many critical issues surrounding the state's power generation and distribution system, including its dependency on out-of-state resources. Although California has implemented effective energy conservation programs, the state continues to experience both population growth and weather cycles that contribute to a heavy demand for power.

Hydro-generation provides approximately 25 percent of California's electric power, with the balance coming from fossil fuels, nuclear, and green sources. As experienced in 2000 and 2001, blackouts can occur due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.

The Impact of Loss of Power on Water & Sewer Systems

California is a populous state that receives minimal rainfall. Approximately 70% of the population obtains its drinking water from surface sources with the remainder relying on ground water supplies. The basic types of system used by the water companies are pressurized (pressure fed) and non-pressurized (gravity fed) systems. The basic types of system used by the sewer companies are collection and treatment systems that use force pumps to move sewerage.

Drinking water is supplied to California residents through a myriad of governmental agencies, cities, districts, private utilities, mutual water companies, private businesses, and individually owned wells. There are over 10,000 public water suppliers in the state serving water to approximately 29 million consumers. Less than 10% of the public water systems in the state serve collectively more than 95% of the state's population. The remaining 90% of the systems serves less than 5% of the population. D.01-05-089 added Category M (limited other customers as necessary to protect public health and safety, to the extent exempted by the Commission) to the list of essential customers normally exempt from rotating outages.

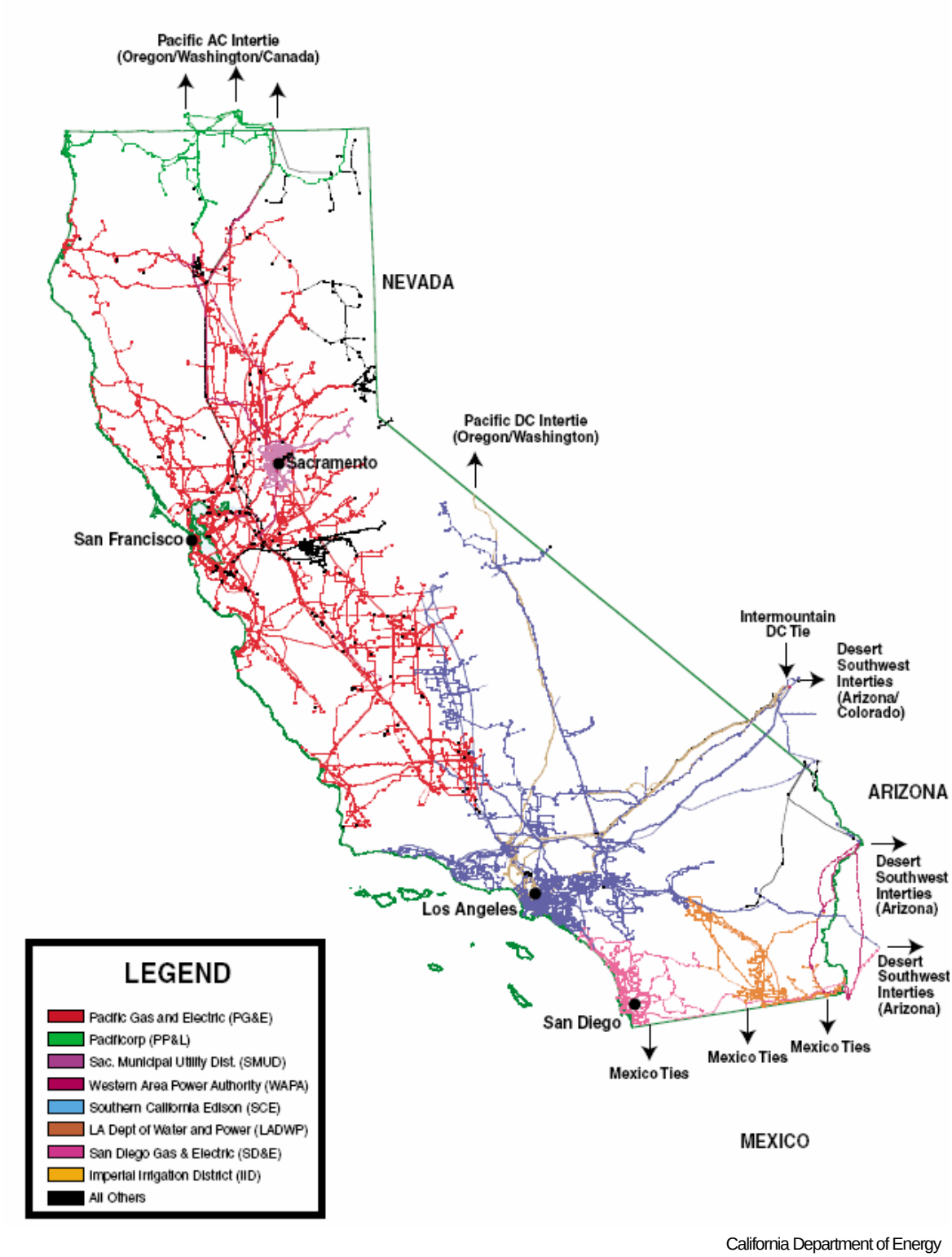
Due to the energy situation and rolling blackouts that occurred earlier in the year, the Water Division has conducted an informal inquiry into the impact of the rolling blackouts and has concluded that during the first four months of the year, California energy situation and rolling blackouts have had no significant impact upon the California Water and Sewer System Industries, in part due to the "Y2K" efforts in 1999. Water utilities and sewer system utilities appear to have the matter well under control with little to no impact on customer service at this time.

The Effects on Public Health & Safety

Public health and safety must be the primary factor used to evaluate a customer's eligibility for exemption from rotating outages. Exempting a fire department from rotating outages is of little value if the water resources needed to fight these fires are not available to it, particular during the high fire season. Fires that start during extreme fire weather conditions are a high risk to

the safety of the residents and firefighters, and have a high probability of spreading rapidly and inflicting major property loss, if water pumping facilities are compromised.

Power Transmission Lines in California



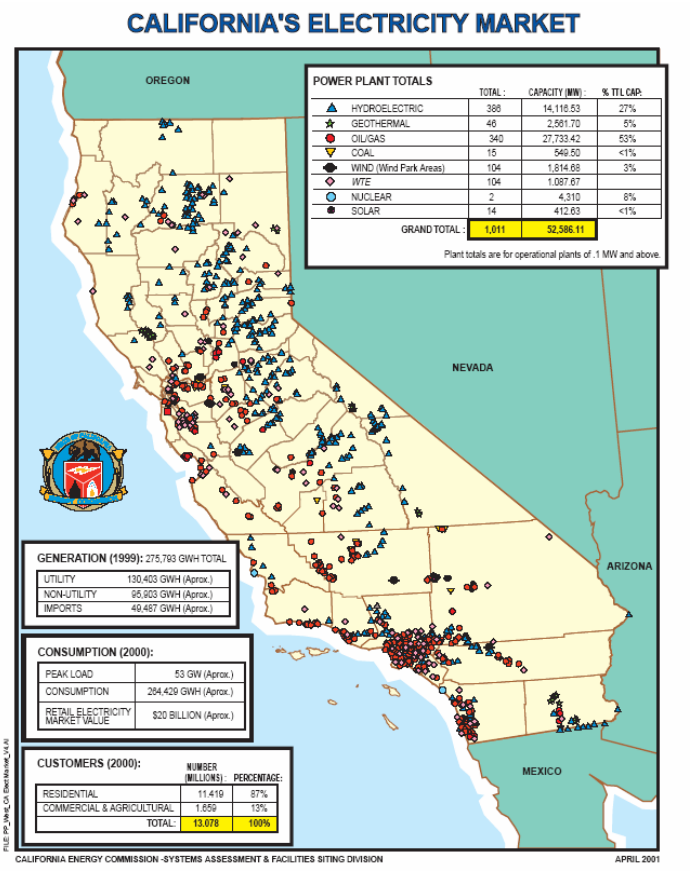
California Department of Energy

A review of the Chief of the Los Angeles County Fire Department's (LACFD) comments indicated that the emergency restoration procedures are likely inadequate and do not ensure

that sufficient water supplies will be available in an emergency. LACFD also is concerned that the procedures have not been activated nor tested, the procedures may not have been communicated consistently between the electric utilities, water agencies and fire fighting forces, the procedures do not provide for the instantaneous supply of water required in a fire emergency, and the current procedures require the caller to identify the exact location of the power restoration.

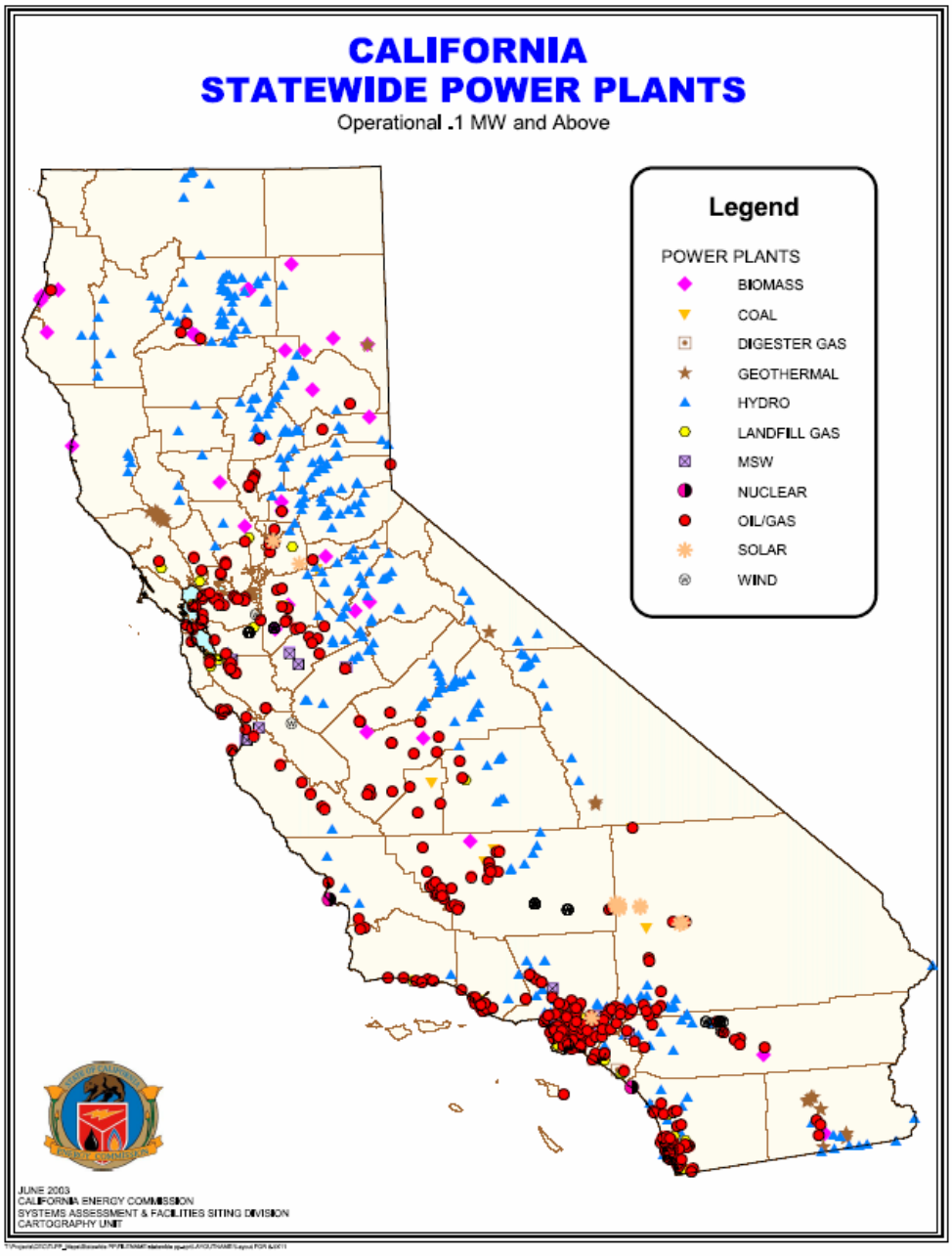
California has experienced many power outages from natural disasters such as fires, floods, earthquakes, and rainstorms. This means that water and sewer systems must have adequate back up power for extended electric outages independent of rolling blackouts. Many large water systems have adequate storage facilities and have installed backup generators to maintain system pressures during power failure due to "Y2K" efforts. Rotating power outage duration is usually less than two hours or between two to four hours. Therefore, rolling blackouts have little impact on customer service.

In addition, water and sewer treatment utilities may request partial or complete rotating outage exemption from electric utilities in times of emergency identified as requiring their service, such as fire fighting. The Water Division believes that it is reasonable to order electric companies to notify all of their water and sewer customers and test the emergency restoration procedures to minimize the effects on public health and safety. The Water Division recommends that water and sewer companies be excluded from the Category M.



Mitigation measures available for these systems

Backup power was a big issue due to the energy situation and rolling blackouts that occurred this summer. Many water systems have argued that backup power was not necessary since they received electrical power from more than one substation, but the power shortage has negated that argument. Many large water systems have adequate storage facilities and have installed backup generators to maintain system pressures during power failures due to "Y2K" efforts. It is the smaller systems that generally do not have backup power. To mitigate possible public health and safety impacts due to a loss of power, the Water Division recommends that all water companies with pressurized systems and sewer companies install backup generators on the wells with the largest pumping capacity or the lead wells. This will assure system integrity.


CALIFORNIA
STATEWIDE POWER PLANTS
Operational .1 MW and Above
Legend
POWER PLANTS
BIOMASS
COAL
DIGESTER GAS
GEOTHERMAL
HYDRO
LANDFILL GAS
MSW
NUCLEAR
OIL/GAS
SOLAR
WIND
JUNE 2003
CALIFORNIA ENERGY COMMISSION
SYSTEMS ASSESSMENT & FACILITIES SITING DIVISION
CARTOGRAPHY UNIT

Water/ Waste Water/Sanitation Loss

Impact:The Public Facilities element examines needs for public facilities in Paramount, identifies, the existing status of these facilities, and proposed ways in which the capacity and distribution of facilities can be better related to needs. Facilities and services considered include water, sewage and flood control facilities, schools, libraries and health care facilities.

Public facilities and services in Paramount come under a number of different jurisdictions including City, Los Angeles County and a variety of special districts. Planning for these facilities has thus not always been well interrelated, and the potential exists for improving location and distribution of facilities to better serve the community. Coordination between these different jurisdictions can be improved to allow for more efficient planning.

Considerable progress in this area has been accomplished in the past several years.

- *Water and Waste Management. Water and waste management systems are regional in their impact, and regional agencies have primary responsibility for system characteristics in the Los Angeles area:*

- *Los Angeles County Engineer. Major refuse disposal facilities, major storm drains, major sewage systems, major distribution coordination, industrial pollution control, contract City services.*

- *Sanitation District. Major sewage facilities (treatment, disposal). Flood Control District: Major flood control facilities (channels, spreading grounds, dams, etc.).*

- *Paramount. Local refuse collection, local water distribution.*

Water Systems.

The City is serviced by two different companies, the largest of which is the City of Paramount Water Department. The source of water supply is groundwater which is pumped through wells distributed throughout the City. The City's wells are drawing water from the Central Basin in Los Angeles County. The static water level is currently at 70 feet. For fiscal year 2004-2005, the City will pump 80% (approximately 2,000 acre feet) Metropolitan Water District water.

Solid Waste Facilities

There are no active landfill facilities within Paramount. The City presently contracts primarily with a private company for the collection of solid waste in the City. This contract becomes exclusive for all solid waste collection in 1994. The company transports the refuse to landfill or disposal sites outside the City. There is no indication that adequate capacity is a major concern to the City. However, a solid waste and resource recycling facility which can receive up to 500 tons of non-hazardous waste daily form the City is now under construction. Valuable materials will be recovered from the waste stream and the remaining waste loaded into 40' transfer trailers and hauled to local landfills for disposal. The facility is located at 7230 Petterson Lane in an M-2 Heavy Industrial zone and is surrounded by compatible land uses. A Conditional Use Permit for the project was granted by the City of Paramount in 1985. The owner/operator of the site is the Metropolitan Waste Disposal Company.

Refuse collection vehicles and transfer trailers using the site will travel on either Rosecrans or Garfield Avenues. Both streets are major truck arterials with two lanes of traffic in each direction and separate left turn lanes and signals at intersections. Immediate access to the site will be from Garfield Avenue onto Petterson Lane.

Impact of Hazards

Earthquake

The level of seismic activity and resulting risk to life and property in Southern California is high. Paramount, however, is second lowest in a 6-point scale for ground shaking potential in the Los Angeles basin. Although the City contains no known faults, a large majority of buildings were constructed prior to establishment of contemporary earthquake regulations

Faults

No known earthquake faults pass through the City. The closest is the Newport-Inglewood Fault, some four miles or more distant. Regional seismicity is primarily related to the Newport-Inglewood and San Andreas Faults.

Earthquake Probability

Considerations in estimating risk of damage from seismic activity include the following:

1. Geotechnical Setting – Essentially the same as the entire Los Angeles basin;

2. Subsurface Soil Conditions – Moderate to high soil strength characteristics with some expansiveness;

3. Local Faulting – No known faults; the closest is the Newport-Inglewood and San Andreas Faults. Paramount is in Seismic Zone 2 in terms of probable damage from regional seismic activity, meaning a moderate ground shaking response to fault activity;

4. Groundwater and Related Factors – A general but very slow lowering of the ground water table with little, if any, indication of subsidence to date;

5. Liquefaction Potential – Generally a low potential except for a section in the southern portion of the City;

6. Settlement and Subsidence – No apparent problem, but should b monitored if the water table continues to decline;

7. Seismic Risk – The major consideration is avoiding uses and structures particularly vulnerable to damage from seismic activity such as: 1) High-occupancy uses, 2) Large-scale structures, 3) Vial uses (e.g., hospital, fire, police, ,major transportation, major utilities), 4) Uses with dependent or disabled populations, 5) Uses which are susceptible to secondary effects from seismic activity (explosion, etc.), and 5) uses inside structures with are Pre-Field Act or structurally unsound.

Damage to Vital Public Services, Systems And Facilities

Bed Loss in Hospitals

Paramount has one major medical facility. 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. City of Paramount 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 district 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 overpass structures.

Sanitation Systems

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

Fire

Urban Conflagrations

Paramount has very little open space and relatively low levels of geologic activity that could create an impact on public safety. The main public safety issue therefore is the potential for urban fire. This potential is heightened due to the presence of several large petroleum distributors within the City as well as older industrial plants engaged in potentially fire-prone activities

Severe Storm & Destructive Winds

The potential risk of widespread damage in Los Angeles County from wind is not as considerable as the risk from earthquakes or wildfires. Nevertheless, severe windstorms pose a significant risk to life and property by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes.

High winds can and do occasionally cause damage to homes and businesses. Severe windstorms can present a very destabilizing effect on the dry brush that covers local hillsides and urban wildland interface areas and increase wildfire threat. Destructive impacts to trees, power lines, and utility services also are associated with high winds.

While the effects of Santa Ana Winds are often overlooked, it should be noted that in 2003, two deaths in Southern California were directly related to the fierce condition. A falling tree struck one woman in San Diego. The second death occurred when a passenger in a vehicle was hit by a flying pickup truck cover launched by Santa Ana winds.

In windstorms, reports of dislodged roofs and fallen trees and power lines are common. The winds are not considered major widespread threats to population and property, but do involve responses from emergency service personnel. Fallen power lines may cause widespread power outages and fire. Falling trees can occasionally cause fatalities and serious structural damage. These incidents are rare as well as localized.

Hazard Extent

Windstorms that affect Los Angeles County, notably Santa Ana winds, are not location specific but rather impact much of the area. Passes between hillsides are susceptible to slightly higher wind speeds, although the amount of unsheltered development in hillside passes is not substantial.

In the case of a Santa Ana wind – which can last several days – hazards created by wind-fallen trees or utility poles can threaten property and have the potential for personal injury and even death. Many older neighborhoods have larger trees. Although these trees are usually well-rooted enough to withstand higher speed winds, broken and falling tree limbs can create significant hazards.

Strong Santa Ana winds typically occur annually. It is unlikely that Los Angeles County will be subject to widespread damage from wind storm activity but there is potential for isolated events, such as damage to property or communications. Although Santa Ana winds are frequent, the occurrence wind with enough velocity to cause significant damage is much less.

Vulnerabilities

There have been past occurrences of winds strong enough to create damage to property in Los Angeles County. However, there has not been a recorded instance of a windstorm strong enough to create wide spread damage. Damage is usually done to roofs and trees damage, and is generally isolated.

Life and Property

Based on the historical data for the region, windstorm events can be expected, perhaps annually, across widespread areas of the County. This can result in i emergency responses. Both residential and commercial structures with vulnerable or weak construction are susceptible to damage. Wind pressure can create a direct and frontal assault on a structure, pushing walls, doors, and windows inward. Conversely, passing currents can create lift suction forces that pull building components and surfaces

outward. With extreme wind forces, roofs or entire buildings can fail, causing considerable damage. Debris carried by strong winds can contribute directly to loss of life, and indirectly to the failure of protective building envelopes, siding, or walls. When severe windstorms strike a community, resulting downed trees, power lines, and damaged property are major hindrances to emergency response and disaster recovery.

Utilities

Historically, falling trees have been the major cause of power outages in the region as a result of high winds. Windstorms can cause flying debris that cut utility lines. For example, tree limbs breaking in winds of only 45 mph can be thrown over 75 feet. As such, overhead power lines may receive damage in even relatively minor windstorms. Falling trees bringing electric power lines down to the ground create the possibility of electric shock.

Infrastructure

Windstorms can damage buildings, power lines, and other property and infrastructure because of falling trees and branches. During wet winters, saturated soils cause trees to become less stable and more vulnerable to uprooting from high winds. Windstorms can result in collapsed or damaged buildings or blocked roads and bridges, damaged traffic signals, streetlights, and parks. Roads blocked by fallen trees during a windstorm may have severe consequences to people who need to be accessed by emergency workers.

Emergency response operations can be complicated when roads are blocked or when power supplies are interrupted. Industry and commerce can suffer losses from interruptions in electric services and from extended road closures. They can also sustain direct losses from damaged buildings, injured personnel, and damage to other vital equipment. There are direct consequences to the local economy resulting from windstorms related to both physical damages and interrupted services.

Transportation

Windstorm activity can have an impact on local transportation in addition to the problems caused by downed trees and electrical wires blocking streets and highways. During periods of extremely strong Santa Ana winds, major highways may require temporarily closure to truck and recreational vehicle traffic. Typically these disruptions are not long lasting, nor do they generally carry a severe long-term economic impact on the region.

Increased Fire Threat

Perhaps the greatest danger from in Southern California comes from the combination of the always present threat of wild fires and the drying hot Santa Ana winds that occur every few years in the urban/wildland interface. With the Santa Ana winds driving the flames, the speed and reach of the wild fires is much greater than in times of calm wind conditions. The higher fire hazard raised by Santa Ana wind conditions requires that even more care and attention be paid to proper brush clearances on property in the wildland/urban interface areas.

Losses

Losses from damage caused by windstorms are generally limited to isolated property such as roofs or tree damage. There are no areas of specific risk in Los Angeles County. Losses are seldom significant in the County.

Existing Mitigation

As stated, one of the most common problems associated with windstorms are power outages. High winds may cause trees to bend, sag, or break (tree limbs or entire trees). They may come in contact with nearby electrical distribution power lines. Fallen trees can cause short-circuiting and conductor overloading. Wind induced damage to the power system may cut power to customers, be costly to repair, and in some cases cause wild land fires.

Hazardous Materials

Industrial pollution is a major issue because of the large amount of heavy industry in the City and the extent of fabrication and processing which occurs.

Hazardous Materials Plans

The City of Paramount has adopted the Los Angeles County Hazardous Waste Management Plan. The City chose not to adopt the County's Map. Permits to store hazardous waste will be approved on a site by site basis, based on the criteria outlined in the Hazardous Waste Management Plan. The Los Angeles County Fire Department maintains a list of all hazardous waste storage locations within the City. The Fire Department has the authority to inspect all sites on a regular basis, along with maintaining the capability to respond to any hazardous material accident.

Section 5 – Hazard Mitigation Strategies

Table of Contents

Table of Contents 1

Mitigation Goals and Objectives 3

Identification of Mitigation Actions 3

Hazard Prioritization 4

Identified Mitigation Constraints 5

Cost Benefit Analysis 6

Priority One Strategies & Recommendations 7

- All-Hazards 7
- Earthquake 8
- Goals and Objectives 8
- Policies and Programs 8
- Fire Protection 10
- Goals and Objectives 10
- Policies and Programs 10
- Flooding 12
- County Response 12
- Ultimate Solution 12
- Mitigation 12

Priority Two Strategies & Recommendations 14

Current Mitigation Strategies 14

Future Mitigation Strategies 45

- Priority One Strategies & Recommendations 45
- Priority Two Strategies & Recommendations 48

Capabilities Assessment 50

- Existing Institutions, Plans, Policies and Ordinances 50

Administrative & Technical Capacity.....50

Regulatory Tools.....51

Fiscal Resources.....52

Section 5 – Hazard Mitigation Strategies

Mitigation Goals and Objectives

The information in the hazard vulnerability analysis and loss estimation information was used as a basis for developing mitigation goals and objectives. Mitigation goals are defined as general guidelines explaining what each jurisdiction wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing city-wide visions. Objectives are statements that detail how the City's goals will be achieved, and typically define strategies or implementation steps to attain identified goals. Other important inputs to the development of city-level goals and objectives include performing reviews of existing local plans, policy documents, and regulations for consistency and complementary goals, as well as soliciting input from the public.

Identification of Mitigation Actions

Mitigation actions that address the goals and objectives developed in the previous step were identified, evaluated, and prioritized. These actions form the core of the mitigation plan. City of Paramount conducted a capabilities assessment, reviewing existing local plans, policies, and regulations for any other capabilities relevant to hazard mitigation planning. An analysis of their capability to carry out these implementation measures with an eye toward hazard and loss prevention was conducted. The capabilities assessment required an inventory of the city's legal, administrative, fiscal and technical capacities to support hazard mitigation planning. After completion of the capabilities assessment, each jurisdiction evaluated and prioritized their proposed mitigations. The City considered the social, technical, administrative, political, legal, economic, and environmental opportunities and constraints of implementing a particular mitigation action. This step resulted in a list of acceptable and realistic actions that address the hazards identified in each jurisdiction.

A full suite of goals, objectives and action items for the City is presented in this Plan. The City then identified and prioritized actions with the highest short to medium term priorities. An implementation, schedule, funding source and coordinating individual or agency is identified for each prioritized action item.

The City of Paramount is supportive of the following hazard mitigation strategies. The City shall make every effort, given appropriate funding, to implement these strategies as conditions warrant.

Hazard Prioritization

Using the definitions listed below, the committee prioritized their mitigation strategies.

Using a 1 to 3 rating definition assign a number to each mitigation strategy recommendation in accordance with the following definitions.

Rating Definitions:

1. High Priority – mitigation measure serves the community's best interest and needs to move forward in the process as a potential project for further strategy development.

2. Medium Priority – mitigation measure serves the community' s needs and should be left in the process for future consideration

3. Low Priority – mitigation measure does not serve the community's best interest and should be removed form the process for consideration/or legal or logistical barriers to this measure cannot be surmounted and the measure should be removed from the process.

Identified Mitigation Constraints

The Planning Committee identified a list of issues that exist that can be considered constraints to mitigation planning implementation: (perspective of the participating committee members)

- Legal
- Economic Constraints
- Budgetary Constraints
- Land Ownership Constraints
- State and Federal Influences
- Enormity of Population and Area Served
- Sensitivity of Information Needed to Complete the Plan.

The City of Paramount is dependent on the below jurisdictions and agencies for disaster response and recovery.

- Los Angeles County Fire Department
- Los Angeles County Sheriff Department

Any data that is brought before the planning committee that is sensitive must be presented as sensitive data and marked not to be shared outside of the task force. (It is the responsibility the task force to be sure the data is identified as sensitive.)

- Building and Code restrictions
- Cultural Demands and Barriers
- Interpretation of Law
- Water Vulnerability Assessment

Cost Benefit Analysis

The City of Paramount is aware they will need to perform a Cost Benefit Analysis before apply for any grants for mitigation projects. They will use the Staplee Cost Benefit formula.

Benefit-cost Review

Benefit-cost review (BCR) is an abbreviated quantitative method of comparing the projected benefits to projected costs of a project or policy. It is used as a measure of cost effectiveness. A modified process called "STAPLEE" was used to methodically review the benefit as opposed to the cost of each strategy and action listed where that information was attainable. The STAPLEE process considers the following:

SOCIAL	Community Acceptance	Effect on Segment of Population		
TECHNICAL	Technical Feasibility	Long-term Solution	Secondary Impacts	
ADMINISTRATIVE	Staffing	Funding Allocated	Maintenance/Operations	
POLITICAL	Political Support	Local Champion	Public Support	
LEGAL	State Authority	Existing Local Authority	Potential Legal Challenge	
ECONOMIC	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required
ENVIRONMENTAL	Effects on Land/Water	Effect on Endangered Species	Effect on HAZMAT / Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws

The result of this review is documented in each strategy matrix

Priority One Strategies & Recommendations

All-Hazards

1. **Community Development Vulnerability Assessment**

   Cost: staff time

   Timeline/Schedule: current

   Responsible Agency: Public Works & Community Development

   Financing: City

   Goal Addressed : Continue to incorporate building codes and future State and Federal codes to reduce or mitigate potential damage to the City's infrastructure. Determine if any, necessary mitigation needs for existing buildings and development

   Related All-Hazards:

2. **Promote Cooperation of Utility System Providers and Neighboring Jurisdictions**

   Cost: Staff Time

   Timeline/Schedule: 12 months

   Responsible Agency: Public Works

   Financing: General Fund

   Goal Addressed : Encourage the cooperation of utility providers, special districts within area, and neighboring cities

   Related Hazard: All-Hazard

3. **Support and encourage efforts of other agencies**

   Cost: staff time

   Timeline/Schedule: 6 months

   Responsible Agency: Applicable City departments

   Financing: General Fund

   Goal Addressed : Support and encourage efforts of other agencies as they plan for and arrange financing for seismic retrofits and other disaster mitigation strategies.

   Related Hazard: All-Hazards.

Earthquake

Goals and Objectives

1. Minimize damage to life and property in the City of Paramount in the event of a major disaster. Prevent serious injury and loss of life in an earthquake.

2. Identify and improve existing areas not meeting fire or earthquake standards.

3. Prevent serious structural damage to critical facilities and structures, particularly where large numbers of people are apt to congregate at one time.

4. Insure the continuity of vital services and functions.

5. Educate the community on how the resident and business person can minimize seismic risk by adequate knowledge and preparation.

Policies and Programs

1. Identify areas of high risk (high densities, older structures, fire hazards) for priority disaster response.

2. Identify and publish an inventory of alternative emergency system in the City (potable water, water for fire protection, water delivery systems, communication, security, waste collection, and emergency power for critical facilities).

3. Identify protected structures for use during disasters and inform appropriate disaster assistance agencies of their location and capabilities.

4. Assign disaster response duties to all public employees, providing them with necessary instructions.

5. Develop an information program to familiarize citizens with seismic risk and to develop seismic awareness.

6. Require special soils and structural investigations for all proposed structures of large scale or involving large groups of people.

7. Continue an active redevelopment program, particularly in older commercial and industrial areas.

8. Coordinate existing planning and building codes with further development to comply with mitigation strategies for all hazards.

The City of Paramount's building codes addresses seismic retro-fitting for new construction. The building codes have been in effect since the early 90"s. The City is upgrading their lighting systems, securing bookcases and warehouse racks. The City of Paramount's building codes are adopted from the International Code Council.

1. Employee Training and continued education

Cost: To be determined.

Timeline/Schedule: ongoing

Responsible Agency: Department of Public Works and Human Resource

Financing: General Funds

Goal Addressed : Conduct appropriate employee training and support continued education to ensure enforcement of building codes and construction standards, as well as identification of typical design inadequacies of housing and recommended improvements

Related Hazard: Earthquake.

2. Continued Building compliance

Cost: staff time

Timeline/Schedule: on going

Responsible Agency: Department of Public Works

Financing: General Fund

Goal Addressed : Continue to require that all new housing be constructed in compliance with structural requirements of the most recently adopted version of the California Building Code.

Related Hazard: Earthquake.

Fire Protection

Goals and Objectives

1. Protect life and property from fire damage.
2. Reduce adverse economic, environmental, and social impacts of fires.
3. Provide fire protection services at the lowest cost commensurate with adequate protection.

Policies and Programs

1. Continue code enforcement efforts to reduce fire hazards associated with older buildings.
2. Require contemporary fire protection for multi-story structures and high-hazard industrial facilities.
3. Require all new development and selected existing development to comply with established fire safety standards.
4. Require new development to install sprinkler systems and smoke detectors, as appropriate.
5. Encourage improved fire insurance programs.
6. Monitor, review and improve, as needed, the City's emergency response capabilities.

Fire Protection service is contracted with Los Angeles County Fire Department. The City of Paramount is not directly responsible for fire mitigation.

Mitigation

1. Fire Protection

Cost: annual contract cost.

Timeline/Schedule: Ongoing

Responsible Agency: City of Paramount, Los Angeles County Fire Department

Financing: General Fund

Goal Addressed : Provide fire service to the citizens of Paramount.

Related Hazard: Fire

2. Continue Networking and Communication between the City and Fire Service Provider

Cost: Staff Time

Timeline/Schedule: Ongoing

Responsible Agency: City of Paramount departments;

Financing: General Fund

Goal Addressed : Maintain a flow of city and citizen input to the Fire Service Provider. And incorporate mitigation strategies recommended by the Fire Service Provider.

Related Hazard: Fire.

Flooding

County Response

The Department of Public Works Emergency Response Plan involves numerous stages of response for affected County Departments, cities and agencies. Prioritized warning and alerting stages will be activated according to established procedures. Some of the agencies to be contacted include the County's Emergency Operations Center and Sheriff's Department, all Los Angeles County Departments, U.S. Army Corps of Engineers, Office of Emergency Management and the thirteen cities that lie within the 100-year flood inundation area.

Ultimate Solution

The current flooding threat to communities surrounding the lower Los Angeles River, Rio Hondo Channel and Compton Creek will be significantly reduced once the County and Corps' LACDA project to increase the capacity of the channel is constructed. Construction of the project will be done in phases and is estimated to be completed by the year 2003.

According to the existing FEMA floodplain maps which show the 100-year flood boundaries and flood depths, the City of Paramount is within the overflow area. According to the 100-Year Flood Boundary Map, the City of Paramount (excluding the northern portion of the City) is within Area 3 (flooding 4 to 8 feet), and Area 5 (flooding less that 2 feet).

To regulate development within flood hazard areas, the City of Paramount utilizes the designations contained within the Flood Insurance Rate Maps (FIRM) prepared by the Federal Emergency Management Agency

(FEMA) to denote areas impacted by 100-year storm events. The intent of the Federal and City regulations is to protect public health, safety, and welfare, and to minimize public and private losses caused by flooding.

Mitigation

1. **Flood Hazard Zone: LACDA Project enabled the City to be removed from the Flood Hazard "A" Zone by providing protection for over a 100 year storm.**

   Cost: Regional project cost was $275 million.

   Timeline/Schedule: Completed

   Responsible Agency: L.A. County Department of Public Works and Army Corps of Engineers

   Financing: County, State, Federal

   Goal Addressed : Raise the flood protection for nine (9) cites that had 81 square miles of area within an "A" zone.

   Related Hazard: Flooding up to ten (10) feet of water within city limits.

2. Orange Avenue/El Camino Storm Drain Project

Cost: $1.5 million

Timeline/Schedule: Completed

Responsible Agency: City of Paramount

Financing: $890,000. C.D.B.G. Grant, $610,000.City of Paramount

Goal Addressed: Eliminate flooding on Orange Avenue, north of Alondra Boulevard, and on El Camino, south of Rosecrans Avenue. These two areas would flood almost every year.

Related Hazard: El Camino – Trailer Park would flood up to 3 ½ feet. Orange Avenue – Would flood over top of curbs.

3. Alondra Grade Separation Project

Cost: $10 million

Timeline/Schedule: Completed 1992

Responsible Agency: City of Paramount

Financing: State, Union Pacific Railroad, and City of Paramount

Goal Addressed: Allows for emergency equipment to respond to and form the easterly and westerly portions of the City by constructing a grade separation.

Related Hazard: Mile long trains blocked all major east/west arterials for more than ½ hour daily.

Priority Two Strategies & Recommendations

1. Construction of Water Wells No. 13 and 14

Cost: $2 million

Timeline/Schedule: Completed Well 13 – 1980, Well 14 – 1986

Responsible Agency: City of Paramount

Financing: Well 13 – EPA Loan, Well 14 – City of Paramount Water Fund

Goal Addressed: provided additional source of water for City.

Related Hazard: Prior to the new wells, the City basically had only one source of water – imported MWD water. Provided water to combat Fires.

2. Traffic Signal Back up Power

Cost: $ 500 Thousand

Completed 2001

Responsible Department: Public Works

Financing: State Department of Energy

Goal Addressed: Installed battery power back up system for all traffic signals.

Related Hazard: All-hazards

Current Mitigation Strategies

1. Regional Traffic Signal and Incident Management Program

Cost: $55 million

Timeline/Schedule: On-going projects through the Gateway COG.

Responsible Agency: Gateway COG

Financing: State, Federal, County, Cities

Goal Addressed: Maximizes travel time through arterial corridors. Traffic Management Centers to monitor and control traffic incident issues.

Related hazard: Relieves congestion during peak-hour travel and during major incidents.

2. Emergency Purchase Orders

Cost: Staff hours

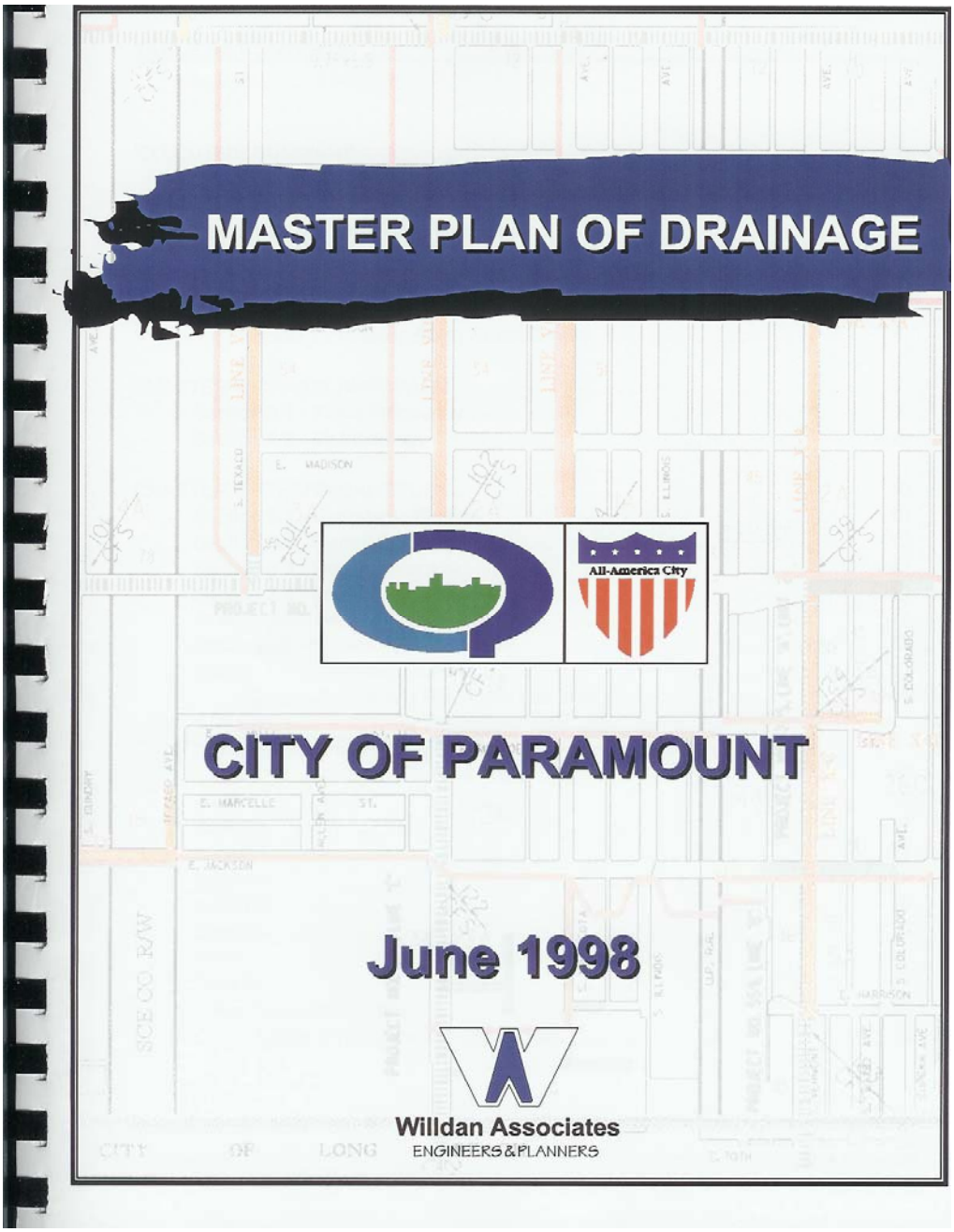
Timeline: Ongoing mitigation project

Responsible Agency: Finance

Financing: General Funds

Goal Addressed: Emergency Preparedness, Establish an emergency supplies/equipment plan.

Related hazard: All-hazards


MASTER PLAN OF DRAINAGE
All-America City
CITY OF PARAMOUNT
June 1998
Willdan Associates
ENGINEERS & PLANNERS

Pag

EXECUTIVE SUMMARY 1

CHAPTER 1 - INTRODUCTION 2
Section 1.1 - Authorization and Scope 2
Section 1.2 - Description of Study Area 2
Figure 1 - Vicinity Map 3
Section 1.3 - History of Drainage 4
Table 1 - Existing Major Storm Drains 5

CHAPTER 2 - STUDY APPROACH 7
Section 2.1 - Flood Frequency 7
Section 2.2 - Methodology 8

CHAPTER 3 - TECHNICAL STUDY 10
Section 3.1 - Hydrologic Studies 10
Section 3.2 - Runoff Coefficient 10
Section 3.3 - Rainfall Intensity 12
Section 3.4 - Impervious Ground Cover 12
Section 3.5 - Time of Concentration 13
Section 3.6 - Hydrology Conclusion 13
Section 3.7 - Hydraulic Studies 13
Figure 2 - General Plan Land Use Map 15

CHAPTER 4 - EXISTING AND PROPOSED
MASTER PLAN FACILITIES 16
Zone 1 - 16
Zone 2 - 17
Zone 3 - 18
Zone 4 - 19
Zone 5 - 19
Zone 6 - 20
Zone 7 - 20
Zone 8 - 22
Other Drainage Facilities 22
Figure 3 - Proposed Drainage Map 23

CHAPTER 5 - ESTIMATED COST OF MASTER PLAN IMPROVEMENTS 24
Section 5.1 - Basis of Estimates 24

Table 2 - Proposed Storm Drain Cost Estimate Summary . . 25
Table 3 - Proposed Storm Drain Cost Estimate Zone 1 26
Table 4 - Proposed Storm Drain Cost Estimate Zone 2 27
Table 5 - Proposed Storm Drain Cost Estimate Zone 3 28
Table 6 - Proposed Storm Drain Cost Estimate Zone 4 29
Table 7 - Proposed Storm Drain Cost Estimate Zone 5 30
Table 8 - Proposed Storm Drain Cost Estimate Zone 6 31
Table 9 - Proposed Storm Drain Cost Estimate Zone 7 32
Table 10 - Proposed Storm Drain Cost Estimate Zone 8 . . . 33
Table 11 - Proposed Storm Drain Cost Estimate: Other 34

APPENDIX

Figure 4 - Hydrology Map
Exhibit A - Hydrology Calculations

EXECUTIVE SUMMARY

The City of Paramount authorized Willdan Associates to develop a Master Plan of Drainage for the City. This report discusses the Master Plan of Drainage and identifies existing drainage deficient areas subject to flooding, recommends drainage facilities to reduce or eliminate these deficiencies, and presents cost estimates for the recommended improvements.

Historically, flooding problems have occurred in low lying areas throughout the City. The City also has numerous streets that have a gutter flow line slope below existing standard design criteria, i.e., street slopes that are very flat, whereby flows are unable to be conveyed quickly by streets to existing drainage facilities during storm events. Flooding also occurs in the City where existing storm drain systems are inadequate.

To determine the facilities required, data from an extensive research of existing drainage facilities was compiled, a hydrologic analysis was completed for the entire City, and hydraulic analysis on existing and recommended drainage facilities were performed. The analysis was based on a 10-year storm event.

Based on the above analyses, it was determined that 15 new storm drain improvement projects are required to convey the storm runoff flows. The total estimated cost of these improvements is **$5,480,000.00**. The improvements have been divided into eight drainage zones, and one other drainage facility as discussed in Chapter 4. The Zone 1 drainage improvements have an estimated cost of $74,385; Zone 2 improvements have an estimated cost of $1,662,280; Zone 3 improvements have an estimated cost of $1,483,278; Zone 4 improvements have an estimated cost of $231,638; Zone 6 improvements have an estimated cost of $858,400; Zone 7 improvements have an estimated cost of $1,114,905; and the other drainage facility has an estimated cost of $54,810. No storm drain improvements are proposed in Zone 5 or in Zone 8.

CHAPTER 1 - INTRODUCTION

Section 1.1 - Authorization and Scope

The City of Paramount authorized Willdan Associates to develop a Master Plan of Drainage for the City. The purpose of the authorization was to provide comprehensive long-range plans for the implementation and development of drainage facility improvements within the City. It was determined that it would be advantageous to identify those areas that are subject to existing and potential flooding and to develop alternatives to reduce or eliminate flood hazards and street flooding.

The scope of the study is basically limited to the existing City boundaries. The scope of the Master Plan investigation includes an extensive review and analysis of the City's existing storm drain system and an analysis of future drainage facility requirements using computer modeling techniques. The study is intended to provide a comprehensive drainage plan consistent with current engineering practice.

Section 1.2 - Description of Study Area

The City of Paramount is located in southeast Los Angeles County. Its general boundary is defined by the Los Angeles River to the west, Century Boulevard to the north, Lakewood Boulevard to the east, and 70th Street to the south. The City is bounded by the communities of Compton and Lynwood on the west, South Gate and Downey on the north, Bellflower on the east, and Bellflower and Long Beach on the south. Figure 1 shows the City in its regional context.

Vicinity Map

Figure 1

The City and surrounding communities are typified by dense residential and commercial development. The corporate boundaries of the City of Paramount encompass approximately 4.6 square miles of land area. Topographically, the area has relatively flat terrain. Elevations range from near 90 feet in the most northeast portion of the City to 70 feet in its most southwest portion. The soils in the City are composed of alluvial fan deposits.

The City is approximately 90 percent developed. The land uses of the developed areas include a combination of residential, commercial, and industrial developments broadly distributed throughout the City.

The average annual precipitation for the City is approximately 11 inches. Major storms consist of one or more frontal systems originating in the North Pacific and occasionally last 4 days or longer. Nearly all precipitation occurs during the months of December through March. Precipitation during summer months is infrequent, and rainless periods of several months are common.

Section 1.3 - History of Drainage

Historically, flooding problems have occurred in the low lying areas and in areas where street slopes are very flat, whereby flows are unable to be conveyed quickly by streets, and storm drains, to existing under-capacity drainage facilities.

The major storm drains run both east-to-west and north-to-south, and ultimately drain to the Los Angeles River. There are 19 existing major storm drain mainline facilities within the City's boundaries. These facilities are briefly described in Table 1 (page 5), and shown on Figure 3, in Chapter 4 - Existing and Proposed Master Plan Facilities.

Table 1

Existing Major Drainage Systems

NAME	LOCATION	MAINTAINED BY
1. Miscellaneous Transfer Drain (MTD) 1412	Alondra Boulevard	County
2. Bond Issue Project No. 9003	72nd Street, Orange Avenue and Alondra Boulevard	County
3. Bond Issue Project No. 6150	Somerset Boulevard and Paramount Boulevard	County
4. Bond Issue Project No. 6101	Somerset Boulevard	County
5. Bond Issue Project No. 559, Line "A"	Rosecrans Avenue, Paramount Boulevard	County
6. Bond Issue Project No. 19	Rosecrans Avenue, Arthur Avenue	County
7. Bond Issue Project No. 725, Line "B," Unit 1	Garfield Avenue	County
8. Bond Issue Project No. 7850, Unit 2	Century Boulevard	County
9. Century Freeway Drain	Century (I-105) Freeway	County
10. Hollidale Park Drain	Orange Avenue	County
11. Bond Issue Project No. 559, Line "C"	Garfield Avenue	County
12. Bond Issue Project No. 725, Line "A," Unit 2	Vermont Avenue	County
13. Bond Issue Project No. 559, Line "B"	Vermont Avenue	County
14. Miscellaneous Transfer Drain (MTD) 1381	Paramount Boulevard	County
15. Miscellaneous Transfer Drain (MTD) 1048, Unit "B"	Paramount Boulevard	County
16. Miscellaneous Transfer Drain (MTD) 1048, Unit "A"	Harrison Avenue, Virginia Avenue, Jackson Street	County
17. Bond Issue Project No. 9005	Downey Avenue	County
18. Bond Issue Project No. 1106, Unit 2	Downey Avenue	County
19. Bond Issue Project No. 9050, Line "A"	Hayter Avenue	County

Section 2.1 - Flood Frequency

In determining the level of protection for a community, it is essential to have an understanding of the term "flood frequency." The following is a definition of frequency as defined by the Federal Emergency Management Agency's Flood Insurance Study, Guidelines and Specifications for Study Contractors, Page 4-10, Section 3.0.

> "Flood events (frequencies) of a magnitude which are expected to be equaled or exceeded once on the average during any 10-, 50-, 100-, or 500-year period (recurrence interval) have been selected as having special significance for flood plain management and for flood insurance rates. These events, commonly termed the 10-, 50-, 100-, and 500-year floods, have a 10, 2, 1, and 0.2 percent chance, respectively, of being equaled or exceeded during any year. Although the recurrence interval represents long term, average period between floods of a specific magnitude, rare floods could occur at short intervals or event within the same year. The risk of experiencing a rare flood increases when periods greater than 1 year are considered. For example, the risk of having a flood which equals or exceeds the 100-year flood (1 percent chance of annual exceedence) in any 50-year period is approximately 40 percent (4 in 10), and for any 90-year period, the risk increases to approximately 60 percent (6 in 10)."

Drainage facilities are typically designed to provide protection from storms of a specified intensity. Presumably, lesser intensities would only partially fill the drainage facilities, and greater intensities would generate runoff quantities that would fill the drains and create excess flow which would travel by overland flow to the major channels.

For consistency with the Los Angeles County Department of Public Works' criteria for urban drainage systems, the analysis used in this study was based on storm frequency of

5. Data on the existing drainage facilities was input into the computer to calculate normal depth values used to determine the capacity of the existing drainage system.

6. Having determined the level of protection provided by the existing drainage system, analyses were performed to determine the facilities necessary to satisfy the flood control requirements. These facilities were designed using computed normal depth values and based on the concept that a 10-year storm protection can be provided by a combination of storm drain flow and the following street flow criteria:

   A. Freeways - no lanes flooded.
   B. Major Highways - one lane unflooded in each direction.
   C. Secondary Highways - one lane unflooded in each direction.
   D. Collector Streets - one lane unflooded.
   E. Residential Streets - curb-to-curb flooding.

Section 3.1 - Hydrologic Studies

Hydrologic studies in the master plan investigation utilized the Modified Rational Method as programmed by the LACDPW. This method, and the data and criteria it incorporates, are consistent with generally accepted methods of analyzing storm water runoff.

The Modified Rational Method computes sub-area hydrographs at collection points within the watershed, combines sub-area runoff with flow from other sub-areas, routes the flow through the drainage system, accounts for channel storage, determines the peak flow in each reach and constructs hydrographs at sub-area collection points, as specified.

The basic formula is:

Q = CIA, where:

Q = Runoff (in cubic feet per second)
C = Coefficient of Runoff
I = Rainfall Intensity (in inches per hour)
A = Land Area (in acres)

Hydrology computations were made using computer analysis techniques and Program F0601, which is a program for computation of storm runoff based on the LACDPW Short-Cut Rational Method. This program permits the addition of certain refinements to the formula which are usually ignored or considered separately by manual methods. The following discussions better describe the method and criteria used in the hydrology studies:

Section 3.2 - Runoff Coefficient

The runoff coefficient is a factor which represents the ratio of the quantity of storm water runoff to the quantity of rainfall striking the earth. The runoff coefficient is a function of

numerous factors, the most significant of which are the type of development and the infiltration capacity of the soil. The LACDPW program computes the coefficient of runoff on the basis of the following formula:

$$C = \frac{0.9P}{100} + \frac{(1 - P)}{100} C_A$$

Where:

C = Coefficient of Runoff
P = Percentage of Impervious Area
C_A = Coefficient of Runoff for Undeveloped or Agricultural Areas

The type of development affects the runoff coefficient since the percentage of impervious area varies significantly with the type of development. For example, agricultural land has an imperviousness value of 0, whereas commercial or highly developed lands have a high percentage of impervious ground cover yielding a high runoff coefficient.

The values of imperviousness used in the modified rational method for this study are given in Section 3.4.

The land development types used for this study are based on the ultimate land use as presented in the City of Paramount's adopted Community Development Management Plan (see Figure 2.)

The native soil type used in this study is based on the soil classifications published by the LACDPW.

Section 3.3 - Rainfall Intensity

Intensity of rainfall is expressed in inches of rainfall per hour and is developed by statistical methods using recorded rainfall records from as many years as possible.

The rainfall intensity data utilized in this report was developed by the LACDPW. The City of Paramount lies within a coastal plain rainfall zone designated as a "K" zone.

Rainfall intensity rates are the result of many factors, the most significant of which is the duration of the storm and the statistical average recurrence interval (10, 25, 50, and 100 year).

The relationship between the rainfall intensity and the duration of the storm is a complex, inverse function that can be characterized by the general statement that rainfall intensities for a given recurrence interval can be very high for short periods of time, regressing to lower average values as the time period is increased.

Section 3.4 - Impervious Ground Cover

The following table summarizes the percentage of impervious ground cover for the various types of development utilized in preparing the hydrology calculations for this study:

Development	Percentage of Impervious Ground Cover
Undeveloped	0%
Low-Density Residential	21%
High-Density Residential/Commercial	48-90%

Section 3.5 - Time of Concentration

A major premise of the Modified Rational Method is that the greatest discharge from an area occurs when runoff from the entire area is contributing to the flow passing the point of concentration. The time of concentration is defined as the interval of time (in minutes) required for the flow at a point of concentration to become a maximum under a uniform rainfall intensity. Generally, the time of concentration is the interval of time for the rainfall from the most remote portion of the drainage area to reach the point of concentration.

The time of concentration is a function of many variables, including the distance from the most remote portion of the drainage area to the point of concentration, the slope and other characteristics of the soil, the type of development, and the infiltration rates of the soils. Time of concentration is computed for each subarea.

Section 3.6 - Hydrology Conclusion

Detailed final hydrology studies should be conducted in conjunction with the final design of storm drain facilities. Final hydrologic studies should include such items as catch basin hydrology, detailed field investigation of drainage patterns, and determination of any physical changes.

Section 3.7 - Hydraulic Studies

The existing drainage facilities were analyzed and improvements to the existing facilities were sized using computed normal depth calculations.

The following values of n were used for various elements of the conveyance system:

Reinforced Concrete Pipe (RCP)	n = 0.013
Reinforced Concrete Box (RCB)	n = 0.014

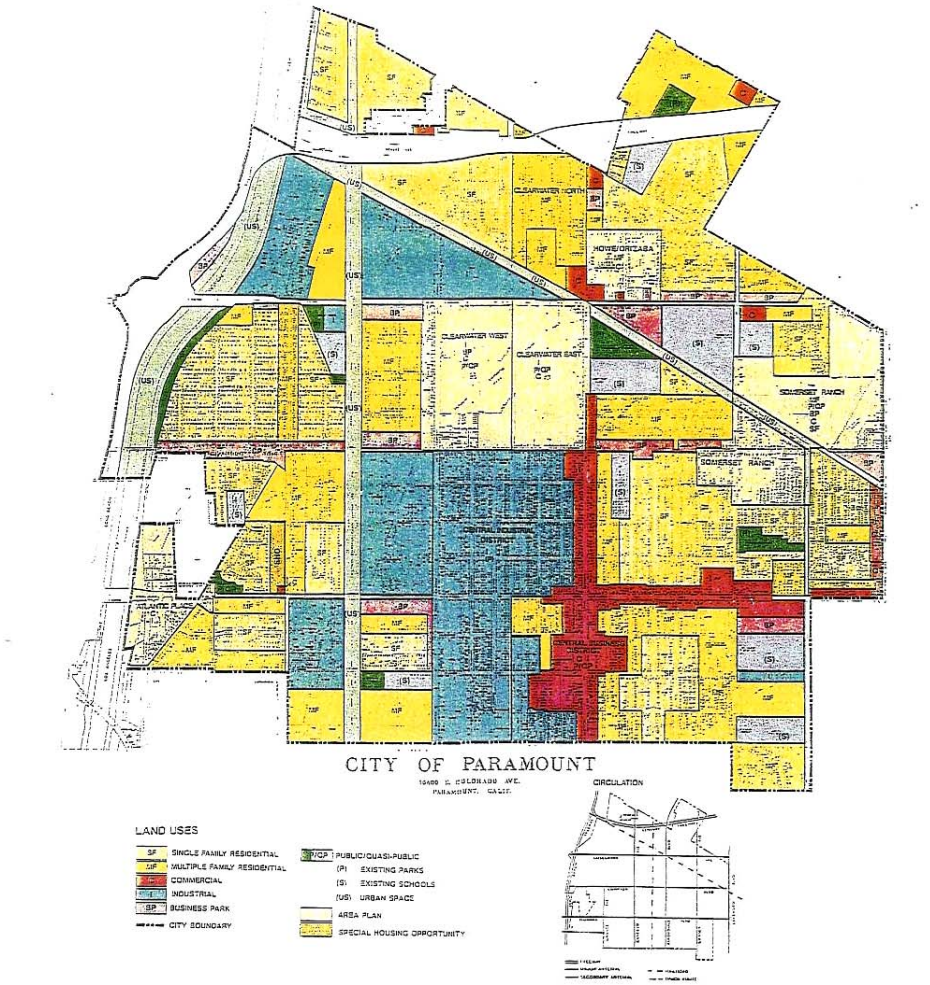
This type of analysis yields a conservative estimate of the existing and proposed drainage systems' capacity compared to analyzing drainage systems under pressure. Due to the lack of hydraulic information available on the Caltrans' and LACDPW's storm drains, time consuming and complicated hydraulic analysis work would have had to be completed beyond the City's boundaries. Thus, for this study, normal depth calculations were used and provided the information necessary to determine existing and proposed storm drain capacities.

Subsurface drains were assumed to be established on a slope approximately parallel to the ground surface or existing drainage facilities where possible. Pipeline sizes were determined to the nearest 3-inch diameter.

In all cases, hydraulic analyses assumed that the streets would be free and clear of any major obstructions and that storm drain systems would be adequately maintained so that blockage would not occur. Street capacity analyses assumed that all streets conformed to the LACDPW typical sections and that street flows would not be allowed to exceed the criteria set forth in Chapter 2, Section 2.2.

General Plan Land Use Map

Figure 2



Master Plan of Drainage
City of Paramount

-15-

CHAPTER 4 - EXISTING AND PROPOSED MASTER PLAN FACILITIES

As a result of the investigations undertaken in the preparation of this report, a drainage concept was developed and refined. For identification of the various systems, the City of Paramount was divided into eight major drainage zones. Each drainage zone has one or more major drainage systems. A major drainage system is defined as a mainline storm drain, with at least one lateral, outletting into a regional flood control facility.

Los Angeles County Department of Public Works (LACDPW) is the agency responsible for the regional flood control facilities and the majority of the local storm drain facilities within the City. The City of Paramount is responsible for other minor storm drain facilities that have not been transferred to LACDPW, which outlet into a major drainage system, as shown on Figure 3.

The existing storm drains located in the portion of the City north of the Century Freeway outlet into the Century Storm Drain which was recently constructed in conjunction with the Century Freeway. The design of the Century Storm Drain complied with existing engineering practices and does not appear to have any deficiencies; therefore, the northern section of the City is not further discussed in this report.

The following sections discuss the adequacy of the existing storm drain facilities. Each section is devoted to one of the eight major drainage zones and includes the proposed facilities recommended in this report.

Zone 1

Zone 1 is located north of Rosecrans Avenue, south of the Century Freeway, east of Orange Avenue, and west of Anderson Street, draining 382 acres to the Los Angeles River. An additional 190 acres north of the City are tributary to the major drainage systems in Zone 1.

Zone 1 outlets to the Los Angles River at Rosecrans Avenue through Project No. 19. Project No. 19 runs east from the Los Angeles River in Rosecrans Avenue to an easement east of Facade Avenue, where it turns north to Arthur Avenue, eventually entering the City at its northerly boundary with the City of Downey. This facility is adequate for a 4-year frequency flood.

Three major storm drains, Project No. 725, Line B, Unit 1, Project No. 559, Line A, and Project No. 559, Line D, adjoin Project 19. Project No. 725, Line B, Unit 1 is adequate for a 1-year frequency flood and begins on Garfield Avenue, approximately 2,000 feet north of Rosecrans Avenue and joins Project 19 at Rosecrans Avenue. Project No. 559, Line A is adequate for a 3-year frequency flood and enters the City at its northerly boundary with Downey. This project runs south on Paramount Boulevard and joins Project 19 at Rosecrans Avenue. Project No. 559, Line D is adequate for a ½-year frequency flood and begins on Facade Avenue, approximately 2,500 north of Rosecrans Avenue. It runs south on Facade Avenue until it gets to Racine Avenue, where it turns southeast and joins Project 19 at Arthur Avenue between Rose Street and Howe Street.

Due to inadequate drainage, an additional storm drain, Line "I", is recommended in the southwest corner of Zone 1. Line "I" would be constructed in El Camino Avenue south of Rosecrans Avenue to San Carlos Street, westerly in San Carlos Street to San Jose Avenue and continue southerly in San Jose Avenue into Zone 2.

Zone 2

Zone 2 is located south of Rosecrans Avenue, north of Somerset Boulevard, and west of Downey Avenue draining 423 acres to the Los Angeles River. Zone 2 outlets to the Los Angeles River through Project No. 6101. This project is adequate for a ½-year frequency flood and runs east on Somerset Avenue until it joins with Project No. 6150 at Minnesota

Avenue. Project No. 6150 is adequate for a 3-year frequency flood. This storm drain begins on Paramount Boulevard, approximately 1,000 feet north of Somerset Boulevard. It runs south on Paramount Boulevard until it gets to Somerset Boulevard, where it turns west towards the Los Angeles River and joins Project No. 6101 at Minnesota Avenue.

Four new storm drains are proposed for Zone 2. Line "I", previously discussed in Zone 1, will continue southerly in San Jose Avenue and connect to MTD 818 at San Miguel Street. MTD 818 continues south in San Jose Avenue and joins Project No. 6101 at Somerset Boulevard. Line "II" would be constructed in Orange Avenue, beginning at San Carlos Street and continue southerly to San Vincente Street, where it connects to Line "A" of MTD 818. Line "III", constructed in Texaco Avenue, would extend from Richfield Street to Somerset Boulevard, where it joins Project No. 6101. Line "III" also includes a lateral easterly in Exeter Street from Texaco Avenue. Line "IV" also connects to Project No. 6101 in Somerset Boulevard. It extends northerly in Garfield Avenue to approximately 300' north of Richfield Street.

Zone 3

Zone 3 is located south of Somerset Boulevard, north of Jackson Street and Alondra Boulevard, and west of UPRR draining 407 acres to the Los Angeles River. Zone 3 outlets to the Los Angeles River through Project No. 9003, which runs east from the Los Angeles River on 72nd Street turning north on Orange Avenue and then turning east on Alondra Boulevard to Minnesota Avenue. Project No. 9003 is adequate for a 2-year frequency flood.

Four additional storm drains are proposed to pick up surface flows in Zone 3. Line "V" would begin at the south end of El Camino Avenue and flow east towards Orange Avenue and southerly in Orange Avenue, until it joins with Project No. 9003, approximately 350 feet

north of Alondra Boulevard. Another lateral would begin at the intersection of Gundry Avenue and Myrrh Street, flowing west in Myrrh Street to Orange Avenue. The other three proposed storm drains would all begin at Jefferson Street and continue southerly to join Project No. 9003, approximately 100 feet north of Alondra Boulevard. Line "VI" would be constructed in Texaco Street, Line "VII" in Garfield Avenue, and Line "VIII" in Minnesota Avenue.

Zone 4

Zone 4 is located in the southwest section of the City, east of Orange Avenue, west of Texaco Avenue, and south of Alondra Boulevard to the City limits, draining 75 acres to the City of Long Beach. Zone 4 drains towards Long Beach through MTD 175. MTD 175 is adequate for 1-year frequency flood. This storm drain begins on Jackson Street, approximately 550 feet east of Orange Avenue. It runs west on Jackson Street until it gets to Orange Avenue, where it turns south leaving the City of Paramount at 70th Street. Due to flooding, an additional storm drain is proposed. Line "IX" would begin on Texaco Avenue at Marcelle Street, run south on Texaco Avenue and turn west on Jackson Street to join MTD 175.

Zone 5

Zone 5 is located east of Texaco Avenue, south of Alondra Boulevard, west of UPRR, and north of the City of Long Beach draining 111 acres towards Long Beach. Zone 5 drains towards Long Beach through Project No. 559, Line C. Project 559, Line C is adequate for a ½-year frequency flood. This storm drain begins at the intersection of Monroe Street and Garfield Avenue, and runs south on Garfield Avenue, eventually leaving the City of Paramount at its southerly boundary with the City of Long Beach. No new storm drains are proposed for Zone 5.

Zone 6

Zone 6 is located east of UPRR, south of Somerset Boulevard, west of Paramount Boulevard, and north of Harrison Street, draining 116 acres towards the southerly boundary with the City of Long Beach. Zone 6 drains towards the City of Long Beach through Project No. 559, Line B. Project 559, Line B is adequate for a ½-year frequency flood. This storm drain begins at the intersection of Jackson Street and Vermont Avenue, runs south on Vermont Avenue, and eventually leaves the City of Paramount at its southerly boundary with the City of Long Beach. One major storm drain, Project No. 725, Line A, Unit 2, joins Project No. 559, Line B. This storm drain begins on Vermont Avenue approximately at Alondra Boulevard and runs south towards Jackson Street, where it joins Project No. 559, Line B.

Due to flooding, an additional storm drain is proposed. Line "X" would begin on Jefferson Street at Colorado Avenue, run west on Jefferson Street to Vermont Avenue, continue southerly on Vermont Avenue, and would join Project No. 725, Line A at Alondra Boulevard. Another section of this storm drain would pick up flow at the intersection of Colorado Avenue and Monroe Street, carrying it west towards Vermont Avenue. Additionally, a section of Project No. 725, Line "A" between Alondra Boulevard and Harrison Street would be replaced to increase the segment's capacity.

Zone 7

Zone 7 is located east of Paramount Boulevard, south of the Century Freeway, west of the City of Los Angeles Department of Water and Power right-of-way, and north of the City of Long Beach, draining 818 acres towards the southerly boundary with Long Beach. An additional 38 acres north of the City are tributary to the major drainage systems in Zone 7.

Zone 7 drains towards Long Beach through Project 1106, Unit 2 and Project No. 9005. This storm drain is adequate for a 1-year frequency flood and begins on Downey Avenue at Century Boulevard, runs south on Downey Avenue, and eventually leaves the City of Paramount at its southerly boundary with the City of Long Beach.

Two other major storm drains, MTD 942 and MTD 655, are located in Area 7. MTD 942 enters the City at the intersection of Century Boulevard and Anderson Street. This storm drain runs south on Anderson Street until it joins with MTD 655 at the S.P.T. CO. Railroad. MTD 655 then runs southeast, parallel to the railroad and joins Project No. 1106 at Downey Avenue. Both MTD 942 and MTD 655 are adequate for a 6-year frequency flood.

Four additional storm drains are proposed to pick up flow in Zone 7. Line "XI" would begin at the intersection of Contreras Street and Castana Avenue. This storm drain would run west on Contreras Street towards Downey Avenue and join Project No. 1106, Unit 2 at the intersection of Downey Avenue and Contreras Street. The second one, Line "XII", would begin at the intersection of Second Street and Indiana Avenue. This storm drain would run south on Indiana Avenue and join RDD 178 at Somerset Boulevard. RDD 178 runs east in Somerset Boulevard and joins Project No. 1106 at Downey Avenue. Line "XIII" would begin at the intersection of Adams Street and Indiana Avenue. This storm drain would run east on Adams Street and would join MTD 1410 at Colony Court. MTD 1410 runs east on Adams Street from Colony Court and joins Project No. 1106, Unit 2 at Downey Avenue. The fourth one, Line "XIV" would begin on Madison Street at Orizaba Avenue. This storm drain would run east on Madison Street and would join Project No. 1106, Unit 2 at Downey Avenue. Another section of this storm drain would pick up flow at the intersection of Georgia Avenue and Jefferson Street, carrying it south towards Madison Street.

Zone 8

Zone 8 is located east of the City of Los Angeles Department of Water and Power right-of-way, south of the City of Downey, west of Lakewood Boulevard and north of Alondra Boulevard, draining 201 acres towards the City of Bellflower. Zone 8 drains towards the City of Bellflower through Project No. 9050, Line A. This storm drain is adequate for a 1-year frequency flood and begins on Somerset Boulevard, approximately 800 feet west of Lakewood Boulevard, runs west on Somerset Boulevard and turns south on Hayter Avenue, eventually leaving the City of Paramount at its southerly boundary with the City of Bellflower. No new storm drains are proposed for Zone 8.

OTHER DRAINAGE FACILITIES

The Drainage Zones discussed above include the majority of the area within the City of Paramount. However, there are small sections of the City adjacent to the City boundaries that are within Drainage Zones of neighboring jurisdictions. There is a proposed storm drain in one such area located in the southeast section of the City, east of Downey Avenue and south of Flower Street.

Line "XV" would replace the surface drain within the existing easement from the southerly end of Verdura Avenue that flows west to Downey Avenue. This storm drain will connect to Project No. 1106, Unit 2, in Downey Avenue.

CHAPTER 5 - ESTIMATED COST OF MASTER PLAN

This chapter presents a summary of the estimated cost of implementing the comprehensive Master Plan of Drainage described in the previous chapter. The various drainage facilities are tabled under their respective drainage zone, as shown on Table 2 through Table 11 in this chapter.

Section 5.1 - Basis of Estimates

The estimated costs, summarized in Table 2, are based on the latest edition of the Los Angeles County Department of Public Works (LACDPW) Cost and Quantity Estimating Manual. An appropriate inflation factor was used to reflect 1998 prices.

Since it is likely that construction of the recommended facilities will be spread out over a number of years, the total cost of master plan implementation will be subject to future construction cost increases. It is, therefore, recommended that the funding programs established for implementation of the Master Plan Drainage make provisions for the increased cost of deferred construction. Inflation factors should be applied to reflect a specific year's costs over the 1988 costs.

The costs presented herein are for the storm drain system construction, contingencies, engineering, surveying, materials testing, contract administration, and inspection. Right-of-way and utility relocations are not included. These latter costs are difficult to accurately estimate without a more detailed study. The storm drain facilities are assumed to be located within existing or future street right-of-way areas or existing storm drain easements.

The cost for utility relocations will also vary from project to project. As a general rule, utilities, such as gas, electric, telephone, irrigation, and water will be required to relocate at the expense of the utility company rather than the project.

PROPOSED STORM DRAIN COST ESTIMATE

SUMMARY BY DRAINAGE ZONE

06/15/98

LOCATION	ESTIMATED PROJECT COST
ZONE 1	$74,385
ZONE 2	$1,662,280
ZONE 3	$1,483,278
ZONE 4	$231,638
ZONE 5	$0
ZONE 6	$858,400
ZONE 7	$1,114,905
ZONE 8	$0
OTHER DRAINAGE FACILITIES	$54,810
TOTAL PROJECT COST	**$5,479,695**

25

Table 4

City of Paramount Master Plan of Drainage
Proposed Storm Drain Cost Estimate

Zone 2
03/11/98

REACH	RCP (in)	LENGTH (ft)	UNIT COST	ESTIMATED CONSTRUCTION COST	ENGINEERING INSPECTION SURVEYING COST	20% CONTINGENCY	TOTAL COST
LINE "I" - EL CAMINO AVE./SAN CARLOS ST. / SAN JOSE AVE.							
** LINE "I-B" - SAN CARLOS ST/SAN JOSE AVE. IN SAN CARLOS ST. FROM EL CAMINO AVE. TO SAN JOSE AVE.; IN SAN JOSE AVE. FROM SAN CARLOS ST. TO SAN MIGUEL ST.	36	1,230	$120	$147,600	$36,900	$29,520	$214,020
LINE "II" - ORANGE AVENUE FROM SAN CARLOS ST. TO SAN VICENTE ST.	36	880	$120	$105,600	$26,400	$21,120	$153,120
LINE "III" - TEXACO AVENUE FROM RICHFIELD ST. TO SOMERSET BLVD.	66	2,560	$190	$486,400	$121,600	$97,280	$705,280
LINE "IV" - GARFIELD AVENUE FROM 300' n/o RICHFIELD ST. TO SOMERSET BLVD.	63	2,260	$180	$406,800	$101,700	$81,360	$589,860
			TOTAL =	$1,146,400	$286,600	$229,280	$1,662,280

** For the other section of Line "I", see Table 3 - Zone 1

27

CITY OF PARAMOUNT MASTER PLAN OF DRAINAGE
PROPOSED STORM DRAIN COST ESTIMATE

ZONE 1
03/11/98

REACH	RCP (in)	LENGTH (ft)	UNIT COST	ESTIMATED CONSTRUCTION COST	ENGINEERING INSPECTION SURVEYING COST	20% CONTINGENCY	TOTAL COST
LINE "I" - EL CAMINO AVE./ SAN CARLOS ST./SAN JOSE AVE.							
** *LINE "I-A" - EL CAMINO AVE.* FROM ROSECRANS AVE. TO SAN CARLOS ST.	36	380	$135	$51,300	$12,825	$10,260	$74,385
			TOTAL =	$51,300	$12,825	$10,260	$74,385

** For the other section of Line "I", see Table 4 - Zone 2.

Table 5

City of Paramount Master Plan of Drainage
Proposed Storm Drain Cost Estimate

Zone 3
03/11/98

REACH	RCP (in)	LENGTH (ft)	UNIT COST	ESTIMATED CONSTRUCTION COST	ENGINEERING INSPECTION SURVEYING COST	20% CONTINGENCY	TOTAL COST
LINE "V" - ORANGE / MYRRH FROM EL CAMINO AVE. TO ORANGE AVE. TO ALONDRA BLVD.; IN MYRRH ST. FROM GUNDRY AVE. TO ORANGE AVE.	60	2,600	$180	$468,000	$117,000	$93,600	**$678,600**
LINE "VI" - TEXACO AVE. FROM JEFFERSON ST. TO ALONDRA BLVD.	54	1,130	$160	$180,800	$45,200	$36,160	**$262,160**
LINE "VII" - GARFIELD AVE. FROM JEFFERSON ST. TO ALONDRA BLVD.	54	1,190	$160	$190,400	$47,600	$38,080	**$276,080**
LINE "VIII" - MINNESOTA AVE. FROM JEFFERSON ST. TO ALONDRA BLVD.	51	1,225	$150	$183,750	$45,938	$36,750	**$266,438**
			TOTAL =	**$1,022,950**	**$255,738**	**$204,590**	**$1,483,278**

TABLE 6

CITY OF PARAMOUNT MASTER PLAN OF DRAINAGE
PROPOSED STORM DRAIN COST ESTIMATE

ZONE 4
03/11/98

REACH	RCP (in)	LENGTH (ft)	UNIT COST	ESTIMATED CONSTRUCTION COST	ENGINEERING INSPECTION SURVEYING COST	20% CONTINGENCY	TOTAL COST
LINE "IX" - JACKSON / TEXACO IN TEXACO FROM MARCELLE ST. TO JACKSON ST, THEN WEST TO 200' w/o GUNDRY AVE.	48	1,065	$150	$159,750	$39,938	$31,950	**$231,638**
			TOTAL =	**$159,750**	**$39,938**	**$31,950**	**$231,638**

TABLE 8

CITY OF PARAMOUNT MASTER PLAN OF DRAINAGE
PROPOSED STORM DRAIN COST ESTIMATE

ZONE 6
03/11/98

REACH	RCP (in)	LENGTH (ft)	UNIT COST	ESTIMATED CONSTRUCTION COST	ENGINEERING INSPECTION SURVEYING COST	20% CONTINGENCY	TOTAL COST
LINE "X" - VERMONT AVE./JEFFERSON ST./MONROE ST.							
LINE "X-A" - VERMONT AVE./JEFFERSON ST. IN JEFFERSON ST FROM COLORADO AVE. TO VERMONT AVE.; IN VERMONT AVE. FROM JEFFERSON ST. TO ALONDRA BLVD.	45	1,770	$140	$247,800	$61,950	$49,560	**$359,310**
LINE "X-B" - MONROE ST. FROM COLORADO AVE. TO VERMONT AVE.	36	360	$120	$43,200	$10,800	$8,640	**$62,640**
LINE "X-C" - UPGRADE EXISTING 30"/36" (VERMONT AVE.) FROM ALONDRA BLVD. TO HARRISON ST.	45	2,150	$140	$301,000	$75,250	$60,200	**$436,450**
			TOTAL =	**$592,000**	**$148,000**	**$118,400**	**$858,400**

31

Table 9

City of Paramount Master Plan of Drainage
Proposed Storm Drain Cost Estimate

Zone 7
03/11/98

REACH	RCP (in)	LENGTH (ft)	UNIT COST	ESTIMATED CONSTRUCTION COST	ENGINEERING INSPECTION SURVEYING COST	20% CONTINGENCY	TOTAL COST
LINE "XI" - CONTRERAS STREET FROM CASTANA ST. TO DOWNEY AVE.	54	1,500	$160	$240,000	$60,000	$48,000	**$348,000**
LINE "XII" - INDIANA AVE. FROM SECOND ST. TO SOMERSET BLVD.	48	650	$150	$97,500	$24,375	$19,500	**$141,375**
LINE "XIII" - ADAMS ST. FROM INDIANA AVE. TO COLONY COURT	36	490	$120	$58,800	$14,700	$11,760	**$85,260**
LINE "XIV" - MADISON ST./ GEORGIA AVE. IN GEORGIA AVE. FROM JEFFERSON ST. TO MADISON ST.; IN MADISON ST. FROM ORIZABA AVE TO 400' w/o DOWNEY AVE.	60	2,070	$180	$372,600	$93,150	$74,520	**$540,270**
			TOTAL =	**$768,900**	**$192,225**	**$153,780**	**$1,114,905**

Future Mitigation Strategies

Priority One Strategies & Recommendations

1. **The City of Paramount has completed their Water Vulnerability Assessment.**

   Vulnerability And Threat Assessment City of Paramount

   Utililities & Infrastructure Department

   December 2003

   By: Tetra Tech, Inc

2. **The City is currently mitigating the recommendations.**

   Construction/Development of a third water well

   Cost: $ 2 Million

   Timeline: As funds become available

   Responsible Department: Public Works

   Financing: Federal and/or State Grant

   Goal Addressed: Develop third water well to supplement their existing water supply. This would ensure further water reliability for fire protection.

   Related hazard: All-hazard

3. **Study Water Mainlines**

   Cost: $ 100 Thousand

   Timeline: As funds become available

   Responsible Department: Public Works

   Financing: Federal and/or State Grants

   Goal Addressed: Upgrade to ensure reliability for fire protection.

   Related hazard: All-hazard

4. Study for Water System Inter-ties

Cost: $ 5 Million

Timeline: As funds become available

Responsible Department: Public Works

Financing: Federal and/or State Grants

Goal Addressed: A study to assess the City of Paramount's water system. The study would determine if the water system would function during and after a disaster.

Related hazard: Earthquake

5. Feasibility Study: Multi-Transportation

Cost: to be determined

Timeline: 12-24 months

Responsible Agency; City of Paramount

Financing: Grants or as funds become available

Goal Addressed: Feasibility Study to determine if a multi-agency concerning transportation would improve response to transportation-related disasters (Trains, MTA, Private truck carriers).

Related hazard: Transportation Incidents/Accidents, Transportation Failure

6. GIS System

Cost: $ 200 Thousand

Timeline: As funds become available

Responsible Department: Information Services

Financing: Grants

Goal Addressed: Plot infrastructure, Critical Facilities, Water, and Utility Systems

Related hazard: Earthquake, Water/Wastewater Loss, Terrorism, Transportation Failure

7. Establish a permanent City of Paramount Hazard Mitigation Steering Committee

Cost: Staff hours, $ 5 Thousand

Timeline: 12 months

Responsible Department: Public Works

Financing: General Funds

Goal Addressed: Establish a Hazard Mitigation Steering Committee to further develop and monitor the City of Paramount's DMA 2000 Plan. Also, to work with other affected agencies and jurisdictions.

Related hazard: All-Hazards

8. Upgrade Telecommunication System

Cost: $1.2 Million

Timeline: 5 years

Responsible Department: Public Safety & Information Services

Financing: Federal and or State Grants

Goal Addressed: Upgrade current telecommunication system to a 900 mz system

Related hazard: All-Hazards

9. Earthquake Preparedness and Awareness Program

Cost: $ 10 Thousand Annually

Timeline: 12 months

Responsible Department: Public Safety

Financing: Federal and or State Grants

Goal Addressed: Community preparedness and awareness training with State, County and City departments

Related hazard: All-hazards

Priority Two Strategies & Recommendations

1. Electronic Communication Message Boards on Interstate 710

Cost: to be determined

Timeline: 12 months

Responsible Department: Public Safety

Financing: Federal and or State Grants

Goal Addressed; Support regional program for communication boards on Interstate 710 for driver information to direct transportation routes.

Related hazard: Transportation Incident/Accident, Transportation Failure

2. Hazardous Material Location

Cost: to be determined

Timeline 6-12 months

Responsible Department: Public Safety & Los Angeles County Fire Department

Financing: General Funds, as they become available

Goal Addressed: Locate all hazardous material in the City of Paramount; work with the Los Angeles County Fire Department

Related hazard: Explosions, WMD/Terrorism

3. Comprehensive Public Education Program

Cost: to be determined

Timeline: 12-18 months

Responsible Department: Public Safety

Financing: To be determined

Goal Addressed: Develop a Comprehensive public education program regarding hazards, emergency response, and public participation

Related hazard: All-hazards

4. Feasibility Study on Opticon System

Cost: $ 300 Thousand

Timeline: 10 years

Responsible Department: Public Safety

Financing: Federal and or State Grants

Goal Addressed: Study the feasibility of purchasing an "Opticon System for traffic signal control by fire and emergency responders.

Related hazard: All-hazard

5. Identify a Warning System- Reverse 911

Cost: $ 26 Thousand

Timeline: 24 months

Responsible Department: Information Services

Financing: Federal and or State Grants

Goal Addressed: Identify what system would be the most efficient. This is a Los Angeles County Sheriff's Department Recommendation and supports the mitigation strategy for the City of Paramount.

Related hazard: All-hazard

6. Upgrades – Traffic Signal Backup Battery Power

Cost: $ 5 Thousand Annual

Timeline: Annual

Responsible Department: Public Works

Financing: to be determined

Goal Addressed: Upgrade current traffic signal battery power back up system.

Related hazard: All-hazards

Capabilities Assessment

The City of Paramount identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment portion of the hazard mitigation plan identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments and their responsibilities associated to hazard mitigation planning as well as codes, ordinances, and plans already in place associated to hazard mitigation planning. The second part of the Assessment provides fiscal capabilities that may be applicable to providing financial resources to implement identified mitigation action items.

Existing Institutions, Plans, Policies and Ordinances

The following is (1) a summary of existing positions their responsibilities related to hazard mitigation planning and implementation; and (2) a list of existing planning documents and regulations related to mitigation efforts within the Operational Area. The administrative and technical capabilities of each jurisdiction, as shown in the table below, provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the Plan. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural or human-caused hazards, floodplain managers, surveyors, personnel with GIS skills and scientists familiar with hazards in the community.

Administrative & Technical Capacity

Position	Y/N	Department/Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Public Works
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Public Works
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y	Public Works
Floodplain manager	N	
Surveyors	N	
Staff with education or expertise to assess the community's vulnerability to hazards	N	
Personnel skilled in GIS and/or HAZUS	Y	Administration
Scientists familiar with the hazards of the community	N	
Emergency manager		Director of Emergency Services
Grant writers	Y	City Manager

Regulatory Tools

The legal and regulatory capabilities of City of Paramount are shown in the table below, which presents the existing ordinances and codes that affect the physical or built environment of each jurisdiction. Examples of legal and/or regulatory capabilities can include: a City's building codes, zoning ordinances, subdivision ordnances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, emergency response plans, and real estate disclosure plans.

Regulatory Tools (ordinances, codes, plans)	Y/N	Comments
Building code	Y	
Zoning ordinance	Y	
Subdivision ordinance or regulations	Y	
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	National Pollution Discharge Elimination System
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N	
Site plan review requirements	Y	
General or comprehensive plan	Y	
A capital improvements plan	Y	
An economic development plan	N	
An emergency response plan	Y	
A post-disaster recovery plan	N	
A post-disaster recovery ordinance	N	
Real estate disclosure requirements	N	
Habitat Management Plan	N	
Master Drainage, Sewer, Water, & Reclaimed Water	Y	
Redevelopment Master Plan	Y	

Fiscal Resources

The table below shows specific financial and budgetary tools available to the City of Paramount such as community development block grants; capital improvements project funding; authority to levy taxes for specific purposes; fees for water, sewer, gas, or electric services; impact fees for homebuyers or developers for new development; ability to incur debt through general obligations bonds; and withholding spending in hazard-prone areas.

Financial Resources	Y/N	Comments
Community Development Block Grants	Y	*
Capital improvements project funding	Y	*
Authority to levy taxes for specific purposes	Y	
Fees for water, sewer, gas, or electric service	Y	This is in the form of a utility users tax.
Impact fees for homebuyers or developers for new developments/homes	Y	
Incur debt through general obligation bonds	Y	**
Incur debt through special tax and revenue bonds	Y	**
Incur debt through private activity bonds	Y	
Withhold spending in hazard-prone areas	Y	

* Subject to grant from State
** Subject to voter approval

As stated in the constraint section, the City of Paramount has limited funding mitigation sources. They will need Federal, State, or County grant assistance to implement mitigation strategies outside their regular business practices.1

Section 6 – Future Actions & Goals

Table of Contents

Summary....2

Long-term Goals....2

Goals, Objectives and Actions....2

High Risk....4

Long Term Objectives and Actions....4

Future Goals and Objectives....5

Prioritization and Implementation of Action Items....7

Section 6 – Future Actions & Goals

Summary

The City of Paramount is supportive of the following actions and goals. The City shall make every effort, given appropriate funding, to implement these actions and goals as conditions warrant.

Long-term Goals

Goals, Objectives and Actions

Listed below are the City of Paramount's specific long term hazard mitigation goals, objectives and related potential actions. For each goal, one or more objectives have been identified that provide strategies to attain the goal. Where appropriate, the City has identified a range of specific actions to achieve the long term objective and goal.

The goals and objectives were developed by considering the risk assessment findings, localized hazard identification and loss/exposure estimates, and an analysis of the jurisdiction's current capabilities assessment. These preliminary goals, objectives and actions were developed to represent a vision of long-term hazard reduction or enhancement of capabilities.

In addition, City representatives met with consultant staff and Departments to specifically discuss these hazard-related goals, objectives and actions as they related to the overall Plan. Representatives of numerous departments were involved in hazard mitigation planning. Those Departments are listed specifically on the minutes of the meetings.

The City of Paramount Hazard Mitigation Steering Committee used the City's General Plan, Emergency Operations Plan, and the Los Angeles County DMA 2000 planning process as a baseline for preparing this Plan. They will continue to network with neighboring jurisdictions and incorporate any future legal planning mechanism into the annual update. The documents and plans will be presented to the Steering Committee for consideration and possible integration. Additionally, when the City's General Plan, Emergency Operations Plan, and Departmental Plans are being reviewed and updated, they will incorporate the DMA 2000 Plan components into the Plans when appropriate. The Chairman of the Hazard Mitigation Plan will be responsible for keeping the departments updated on the mitigation strategy development.

The City of Paramount has developed the following Long Term Goals for their Hazard Mitigation Plan Program.

Goal 1. Promote Disaster-resistant future development.

Goal 2. Increase public understanding and support for effective hazard mitigation.

Goal 3. Build and support local support and commitment to become less vulnerable to hazards.

Goal 4. Enhance hazard mitigation coordination and communication with federal, state, local

Goal 5. Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and Planning Jurisdiction owned facilities from the following high risks:

High Risk

- Earthquake
- Flood
- Transportation Accident/Incident
- Utility Loss
- Water/Wastewater Disruption
- Explosions
- WMD/Terrorism

Long Term Objectives and Actions

The City of Paramount developed the following broad list of objectives and actions to assist in the implementation of each of their identified goals. The City developed objectives to assist in achieving their hazard mitigation goals. For each of these objectives, specific actions were developed that would assist in their implementation.

Objective 1: Facilitate the development or updating of general plans and zoning ordinances to limit development in hazard areas.

Action 1. Update General Plan every 10 years.

Action.2 Attract and retain qualified, professional and experienced staff.

Action 3 Identify high hazard areas.

Objective 1.B: Facilitate the adoption of building codes that protect existing assets and restrict new development in hazard areas.

Action 4 Review Codes every 3 years.

Action 5 Establish emergency review procedures for codes.

Objective 2: Facilitate consistent enforcement of general plans, zoning ordinances, and building codes.

Objective 3: Limit future development in hazardous areas

Action 6 Development should be in harmony with existing topography.

Action 7 Development patterns should respect environmental characteristics.

Action 8 Development should be limited in areas of known geologic hazards.

Action 9 Development in floodplains shall be limited to protect lives and property.

Objective 4: Address identified data limitations regarding the lack of information about new development and build-out potential in hazard areas.

Objective 5: Increase public understanding, support and demand for hazard mitigation for new developments.

Action 10 Gain public acceptance for avoidance policies in high hazard areas.

Future Goals and Objectives

Goal 1: Increase public understanding and support for effective hazard mitigation.

Objective 1: Educate the public to increase awareness of hazards and opportunities for mitigation actions.

Action 1 - Publicize and encourage the adoption of appropriate hazard mitigation actions.

Action 2 - Provide information to the public on the Planning Jurisdictions website.

Action 3 - Gain public acceptance for avoidance policies in high hazard areas.

Goal 2: Increase public understanding and support for effective hazard mitigation.

Objective 1: Educate the public to increase awareness of hazards and opportunities for mitigation actions.

Action 1 - Publicize and encourage the adoption of appropriate hazard mitigation actions.

Action 2 - Provide information to the public on the Planning Jurisdictions website.

Action 3 - Gain public acceptance for avoidance policies in high hazard areas.

Goal 3: Enhance hazard mitigation coordination and communication with federal, state, County and local regional jurisdictions.

Objective 1 Establish and maintain closer working relationships with state agencies, county departments and local regional jurisdictions..

Action 1 - Develop multi-jurisdictional/ multi-functional training and exercises to enhance hazard mitigation.

Goal 4: Enhance hazard mitigation coordination and communication with federal, state, county and local regional jurisdictions

Objective 1 Encourage other organizations to incorporate hazard mitigation activities

Action 1 - Leverage resources and expertise that will further hazard mitigation efforts.

Action 2 - Update the Planning Jurisdictions multi-hazard mitigation plan on a regular basis.

Action 3 - Establish and maintain lasting partnerships through existing Planning Jurisdictions Organization .

Action 4 - Maintain coordination, communication and cooperation with the State in administering recovery programs.

Action 5 - Continue to exchange resources and work with local and regional partners.

Goal 5: Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to earthquakes.

Objective 1: Develop a comprehensive approach to reducing the possibility of damage and losses due to earthquakes.

Action 1 - Maintain Building Codes to reflect current earthquake standards.

Action 2 - Encourage and participate in community awareness meetings.

Action 3 - Distribute printed publications to the communities concerning hazards.

Objective 2: Protect existing assets with the highest relative vulnerability to the effects of earthquakes.

Action 4 - Identify hazard-prone structures as feasible

Action 5 - Encourage and continue the study ground motion, landslide, and liquefaction.

Objective3: Coordinate with and support existing efforts to mitigate earthquake hazards

Action 6 - Identify projects for pre-disaster mitigation funding.

Action 7 - Design and implement an ongoing public seismic risk assessment program.

Action 8 - Collaborate with Federal, State, universities and local agencies' mapping, efforts.

Objective 4: Address identified data limitations regarding the lack of information about the relative vulnerability of assets from earthquakes.

Action 9 - Assess Planning Jurisdictions utility infrastructure with regard to earthquake risk, including public and private utilities.

Action 10 - Encourage the public to prepare and maintain a 3-day preparedness kit for home and work for all hazards

Goal 9: Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to floods.

Objective 1: Develop a comprehensive approach to reducing the possibility of damage and losses due to floods.

Action 1 -Review and compare existing flood control standards, zoning and building requirements.

Action 2 - Identify and update flood-prone areas

Action 3 - Adopt policies that discourage growth in flood-prone areas.

Objective 2: Protect existing assets with the highest relative vulnerability to the effects of floods within the 100-year floodplain.

Action 4 - Assure adequate funding where feasible to restore damaged facilities to 100-year flood design.

Action 5 - Update storm water system plans and improve storm water facilities in high-risk areas.

Action 6 - Ensure adequate evacuation time in case of major hazard event.

Objective 3: Coordinate with and support existing efforts to mitigate floods (e.g., US Army Corps of Engineers, US Bureau of Reclamation, California Department of Water Resources).

Action 7 - Develop a flood control strategy that ensures coordination with Federal, State, county and local agencies.

Action 8 - Improve hazard warning and response planning.

Action 9 - Seek pre-disaster mitigation funding.

Objective 4: Address identified data limitations regarding the lack of information about the relative vulnerability of assets from flooding.

Action 10 - Maintain, develop and implement hazard awareness program.

Prioritization and Implementation of Action Items

Once the comprehensive list of Paramount's goals, objectives, and action items listed above was developed, the proposed mitigation actions were prioritized by the Planning Executive Committee. This step resulted in a list of acceptable and realistic long term actions that address the hazards identified in the City.

The Disaster Mitigation Act of 2000 (at 44 CFR Parts 201 and 206) requires the development of an action plan that not only includes prioritized actions but one that includes information on how the prioritized actions will be implemented. Implementation consists of identifying who is responsible for which action, what kind of funding mechanisms and other resources are available or will be pursued, and when the action will be completed.

The top 5 prioritized mitigation actions as well as an implementation strategy for each are:

Action Item #1: Coordinate the development of a multi-Hazard DMA 2000 plan.

Coordinating Individual/Organization: City of Paramount will work together with the member of the Planning Jurisdictions.

Potential Funding Source: FEMA Grants/ General Funds for Planning Jurisdictions and Cities.

Implementation Timeline: 1 Year

Action Item #2: Publicize and encourage the adoption of appropriate hazard mitigation actions.

Coordinating Individual/Organization: Planning Jurisdictions

Potential Funding Source: General Fund/Federal or State grants.

Implementation Timeline: 1 - 3 years

Action Item #3: Update Building Codes to reflect current earthquake standards.

Coordinating Individual/Organization: Public Works and Building and Codes Department

Potential Funding Source: General Fund/Federal or State Grants.

Implementation Timeline: 2 - 5 years

Action Item #4: Review and compare existing flood control standards, zoning and building requirements.

Coordinating Individual/Organization: Department of Public Works (DPW)/

Potential Funding Source: General Fund/Federal or State Grants

Implementation Timeline: 1 - 3 years

Action Item #5: Encourage the public to prepare and maintain a 3-day preparedness kit for home and work.

Coordinating Individual/Organization: OEM/ Media & Public Relations/IT

Potential Funding Source: General Fund/Federal or State grants

Implementation Timeline: 1 - 3 years

Section 7 – Plan Maintenance

Table of Contents

Table of Contents 1

Monitoring, Evaluating & Updating 2

Plan Maintenance 2

Continued Public Involvement 3

Implementing Through Existing Programs 4

Section 7 – Plan Maintenance

Monitoring, Evaluating & Updating

Plan Maintenance

This section of the Plan describes the formal process that will ensure that the Plan remains an active and relevant document. The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years.

This section describes how the City of Paramount will integrate public participation throughout the plan maintenance process. Finally, this section includes an explanation of how jurisdictions intend to make considerations for the mitigation strategies outlined in this Plan into existing planning mechanisms.

The City of Paramount will be responsible for monitoring the plan annually for updates to jurisdictional goals, objectives, and action items. The City of Paramount's Hazard Mitigation Steering Committee members will report annually by email, phone or meeting to the Committee Chairman the progress of mitigation projects or the need to develop new strategies. The Chairman of the City of Paramount Hazard Mitigation Steering Committee will be responsible for adding the report to the Plan. The Chairman will reconvene the Steering Committee as needed to discuss and adopt these updates.

The Plan will be evaluated by The City of Paramount Hazard Mitigation Committee and by each participating jurisdiction at least every two years to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The Plan will also be re-evaluated by City of Paramount department leads or their select jurisdictional representative based upon the initial Plan criteria used to draft goals, objectives, and action items for this Plan. Action items will be reviewed to determine their relevance to changing situations in the City of Paramount, Los Angeles County Operational Area, as well as changes in State or Federal regulations and policy. The City of Paramount will conduct an assessment of each portion of the Plan to determine if this information should be updated or modified, given any new available data.

The City of Paramount's lead team members will be the responsible group for updates to the Plan. All City of Paramount participants will be responsible to provide the Steering Committee Chairperson with jurisdictional-level updates to the Plan when/if necessary as described above. These updates will be reported to the Chairman by phone, email, or written reports. The Committee Chairman will submit an updated plan to the State of California and FEMA for review every five years.

The Chairman will be responsible for contacting the Committee members on an annual basis by written correspondence. The Plan will be distributed to the lead team members to review, comment, and submit changes in their respective departments, district, or jurisdiction. The Chairman will reconvene the committee after an agreed upon time to collaborate and adopt appropriate updates.

The updates will include information on:

- The progress of mitigation programs/projects.
- Develop, if necessary, new mitigation strategies to reduce loss or damage to facilities and potential loss of lives.
- Identify, if any, hazard vulnerability to the City of Paramount, through data from expert sources. Reprioritize hazards if appropriate.

- Budgetary reports and grant opportunities, to identify funding constraints or funding opportunities.
- Reevaluate their Capability Assessment for technical, political, legal, or services abilities.
- Review and incorporate public involvement.

The City of Paramount will have the opportunity to implement recommended action items through existing programs and procedures that are deemed appropriate. Upon adoption of the Plan, the multi-jurisdictional participants can use the Plan as a baseline of information on the natural hazards that impact the region.

Continued Public Involvement

The City of Paramount is dedicated to involving the public directly in review and updates of the Plan.

A representative from selected departments/agencies will be responsible for monitoring, evaluating, and updating the Plan as described above. During all phases of plan maintenance the public will have the opportunity to provide feedback.

A copy of the Plan will be publicized and available for review on the City of Paramount website. In addition, copies of the plan will be catalogued and kept at all of the appropriate participants in the City. The existence and location of these copies will also be posted on the Paramount's website. The site will contain contact information for City of Paramount to which people can direct their comments and concerns.

All public feedback will be forwarded to the appropriate Hazard Mitigation Steering Committee for review and incorporation (if deemed appropriate).

A press release requesting public comments will also be issued after each evaluation or when deemed necessary by the City of Paramount. The press release will direct people to the website or appropriate local agency location where the public can review proposed updated versions of the Plan. This will provide the public an outlet for which they can express their concerns, opinions, or ideas about any updates/changes that are proposed to the Plan. The Hazard Mitigation Steering Committee members will assure the resources are available to publicize the press releases and maintain public involvement through public access channels, web pages, and newspapers as deemed appropriate.

Implementing Through Existing Programs

Implementation Element

This component of the City of Paramount General Plan will serve as a guide for the implementation of the General Plan's goals and policies.[1] The State's General Plan Guidelines state the following with respect to a General Plan's implementation:

> "The public can clearly see a City's commitment to its General Plan by the manner in which local officials implement the plan's goals and policies. The most successful plans are those that were written from the start with a concern for realistic and properly timed implementation measures. Adopting infeasible planning policies or implementation measures can prove to be a waste of time and a costly error. To avoid this, [the] planners who implement the Plan should be involved in its preparation. In addition, the General Plan should identify, where appropriate, the local agencies responsible for carrying out implementation actions."[2]

In the late 1960s and early 1970s, many elected officials, planning professionals, legal observers, and citizens were concerned that if long-range comprehensive planning were to be useful and effective, a more direct linkage between the General Plan and the day-to-day operation was imperative. This point of view clearly acknowledged that the day-to-day decision-making at the local level should not be made on an ad hoc, disjointed, or arbitrary basis, but rather should follow a logical process that is consistent with the General Plan.[3]

These arguments formed the basis for a newly emerging philosophy that held that governments engaging in land use planning must base their official regulatory land use and development controls on, or make them consistent with, such planning. This philosophy came to be known as the *consistency doctrine*. The consistency doctrine was reinforced by a key court of appeal decision in 1965 (O'Loane v. O'Rourke [1965] 231 Cal.App 2d 774, 782) and by enacting laws passed in 1970 and 1971.[4] This philosophy was further institutionalized through statutes requiring consistency of certain local actions with the adopted General Plan.

The implementing programs identified herein will also be effective in mitigating the environmental impacts of future development supported or otherwise permitted by the City of Paramount General Plan. This is underscored in the Environmental Impact Report (EIR) prepared for the General Plan. Specific General Plan policies that will be effective in mitigating the environmental impacts of future development are clearly identified for each of the issues considered in the EIR. This approach is also consistent with the State's General Plan Guidelines that state the following:

> ...this reinforces the requirements of CEQA that call for employing mitigation measures to reduce or eliminate the significant environmental effects identified in the plan's environmental document. The mitigation measures must be reflected in the general plan's implementation program.[5]

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[1] The State of California Planning, Zoning, and Development Law require the identification of implementation actions with respect to the open space, housing, and noise elements. The La Habra Heights General Plan goes well beyond those legislative requirements by indicating the applicable implementation measures and programs for the remaining General Plan Elements.

[2] Office of Planning and Research. *State of California General Plan Guidelines*. Chapter 5 – Implementing the General Plan. November 1990.

[3] Ibid.

[4]

[5] Office of Planning and Research. *State of California General Plan Guidelines*. Chapter 5 – Implementing the General Plan. November 1990.

Land Use Element Programs

There are a number of programs that will be effective in implementing City policy relative to community development. These programs are summarized in this section.

- *Building Code Review Program.* The City will periodically review, and if necessary, update the Uniform Building Code (UBC) to reflect current technology and regulations. Procedures for the periodic review of the UBC will be identified by the Building Official. This review will be undertaken by designated individuals to identify appropriate changes to the UBC that should be considered. Amendments to the City's Building Code will then be made, as appropriate.

- *Code Enforcement.* Code enforcement is an integral part of the City's efforts to improve the appearance of substandard structures, properties, and signage. Community code enforcement efforts (funding and staffing) will continue to be the primary means to ensure that properties are well-maintained.

- *Design Guidelines and Review Program.* The purpose of the design review process is to ensure that building design, architecture, and site layouts are compatible with surrounding development. These guidelines will initially focus on the Citywide commercial areas located along Atlantic and Washington Boulevards. The first step of the program implementation will involve the identification of design guidelines and procedures for design review. The second step will involve a public outreach effort to inform businesses and citizens.

- *Environmental Review.* The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). Environmental review shall be provided for major projects, as well as those that will have the potential to adversely impact the environment. Land use and development are among the issue areas that will be addressed in the environmental analysis. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures that may be recommended as part of the environmental review process.

- *Redevelopment.* The City will continue to encourage future redevelopment of industrial and commercial projects in suitable locations to strengthen the City's tax and employment base. The existing redevelopment plans applicable to the City's three project areas will continue to be implemented. The City may investigate the feasibility of establishing new redevelopment projects in the future.

- *Zoning Ordinance.* The City will continue to review the Zoning Ordinance and Map to ensure that the development standards are consistent with those identified in the Land Use Element. The City will initiate appropriate changes to the Zoning Map to ensure conformity between the Community Development Element and Zoning Map.

Transportation Programs

There are a number of key programs the City will continue to implement or undertake as part of the implementation of this General Plan. These existing and proposed programs are identified below.

- *Caltrans Coordination.* The City will coordinate efforts with Caltrans to upgrade area freeways. The purpose of this undertaking is to ensure that the City is fully apprised of roadway and facility improvement efforts in the early stages of planning and design. The City will continue to work with Caltrans and

Implementation Element

the Metropolitan Transportation Authority (MTA), as appropriate, and will request to be on all notification lists for future projects that may impact the City.

- *Capital Improvement Planning.* The City's Capital Improvement Program (CIP) is a five-year plan that indicates the timing of major capital expenditures. Individual projects are reviewed and ranked on an annual basis, and may include streetscape upgrades, installation of traffic signals, slurry seal for streets, sidewalk repair, and sewer line upgrades. The City will continue to update, review, and implement its CIP to consider transportation-related improvements.

- *Enforcement of Truck Parking.* The City will continue to cooperate with the Los Angeles County Sheriff's Department in the enforcement of trucks using non-designated truck routes, illegal on-street parking, and other traffic laws.

- *Environmental Review.* The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). The environmental review shall be provided for major projects and those that will have a potential to adversely impact the environment. Among those issues that may be addressed in the environmental analysis are traffic, parking, and circulation. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures. The City's environmental review procedures are currently in place.

- *Mitigation Fee/Use Fee Study.* The City will explore strategies to ensure that the public does not bear an undue burden associated with new development. The City will determine a reasonable and fair method of assessing new development for the cost of providing any additional infrastructure required by the development. The first step of this program's implementation calls for the preparation of a mitigation fee strategy study to be initiated by the City Administrator. The subsequent phases of this program will involve examining the current truck fees to ensure that the City is receiving its fair share of licensing fees, given the relatively high volumes of truck traffic in the City.

- *Residential Parking Program.* The City will review existing parking standards and regulations applicable to the residential neighborhoods. This program will consider the feasibility of additional on-street parking restrictions and a permit parking program as a means to eliminate the "storage" of extra vehicles on City streets.

- *Public Transit Review Program.* The City will evaluate the need to modify routes, schedules, and fares of local transit service to achieve circulation goals and policies (e.g., coordinate the local transit system with the regional transit system). The City will also continue to work with the MTA and other transit service agencies in adjacent communities to identify the most beneficial route and stops in the City. The City will provide development plans to service providers for review for those projects that may affect public transit services.

- *Signalization.* The City will strive to provide optimum signalization on major thoroughfares to maximize circulation efficiency, such as participation in a regional signalization program. City staff will outline both the need and strategy for improved signalization. Coordination with Caltrans and MTA in this regard will be undertaken.

- *Truck Route Planning.* The City will work with other cities, public agencies,

and stakeholders to establish a system of truck route plans for the sub-region.

- *Transit Centers.* Transit centers consisting of bus turnouts and loading areas, weatherproof shelters, information centers, emergency phones, and in some areas park-n'-ride facilities, will be implemented as part of new development. The Lead City Agency to study the feasibility of developing "transit centers" will be designated by the City Administrator.

Resource Management Programs

The following programs will be effective in implementing the policies contained in this Element.

- *Air Quality Planning.* The City of Paramount will continue to participate in the regional planning efforts being undertaken by the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG) to develop and implement strategies to improve regional air quality. The City of Paramount will continue to work with the SCAQMD and SCAG and the surrounding cities in improving air quality.

- *Cultural Awareness.* A cornerstone of this program will be the identification of a site/location that may be used for the storage and collection of artifacts, photographs, books, and displays. The City will cooperate with local organizations (such as the local historical society, Chamber of Paramount, etc.) and individuals to acquire resource materials concerning local history and culture. These materials include books, photographs, artifacts, furniture, etc., that may be displayed in the future City museum. The City will continue to support cultural resource conservation and preservation efforts in Paramount.

- *Cultural Resource Management.* Should archaeological or paleontological resources be encountered during excavation and grading activities, all work would cease until appropriate salvage measures are established. Appendix K of the California Environmental Quality Act (CEQA) Guidelines shall be followed for excavation monitoring and salvage work that may be necessary. Salvage and preservation efforts will be undertaken pursuant to Appendix K requirements outlined in CEQA.

- *Design Guidelines and Review.* The City shall continue to implement its current design review procedures. The purpose of the design review process is to ensure that building design, architecture, and site layouts are compatible with surrounding development. The design review process is an important component of development review. This process may be used to consider a potential development's impact on the architectural integrity of historically significant structures and sites.

- *Energy Conservation.* The City shall continue to enforce the energy conservation standards in Title 24 of the California Administrative Code, the Uniform Building Code, and other state laws on energy conservation design, insulation, and appliances. Energy needs shall be evaluated and conservation measures incorporated into new development in accordance with Appendix F of the State of California Environmental Quality Act (CEQA) Guidelines. Other measures that would reduce energy consumption during construction and subsequent operation of new development shall be encouraged. The City will continue to work with Southern California Edison and the Southern California Gas

Company to promote energy conservation.

- *Environmental Review.* The City shall continue to evaluate the environmental impacts of new development and identify applicable mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). Environmental review shall be provided for those projects that will have a potential to adversely impact the environment. Issue areas that will be addressed in the environmental analysis related to resource issues include: air quality, water and hydrology, plant life, animal life, natural resources, energy, aesthetics, recreation, and cultural resources. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures.

- *Park Development & Renovation Program.* The City will evaluate strategies to renovate and protect existing public open space from encroachment or conversion to other uses. Any new development will comply with the guidelines set forth by the American Disabilities Act (ADA). Potential improvements will be programmed into the City's Capital Improvements Program (CIP). This program will also evaluate the feasibility of new park development in the City.

- *Park Watch/Adopt a Park.* The City will analyze the feasibility of implementing an adopt-a-park program along with a "park watch" program. Individual neighborhoods will be encouraged to become involved with the operation, maintenance, and safety of their parks through an expanded Neighborhood Watch Program. The first step of implementation will involve coordination with the Los Angeles County Sheriff's Department to expand the scope of the Neighborhood Watch Program to include the monitoring of local parks. The City will then establish a program by which individuals, organizations, and businesses can "adopt" a local City park. Qualifications for "park adoption" will be identified by the City Parks and Recreation Department. As part of the "adoption" process, individuals, organizations, and businesses may agree to assist in park maintenance, the financing of improvements, security, etc.

- *Storm water Pollution Prevention.* This program is designed to prevent contaminants from entering the storm drain system. A key element of this program is the National Pollution Discharge Elimination System (NPDES) requirements, which are administered through a Countywide permit. These requirements call for measures to be imposed during construction activities, handouts for residential uses, and best management practices (BMPs) for non-residential uses. The City shall also continue to implement projects to maintain storm water quality, such as street sweeping, catch basin grills, signs, etc.

- *Water Conservation Ordinance.* The City will continue to implement its Water Conservation Ordinance. In addition, the City will review the ordinance to ensure that it promotes the use of xeriscape landscaping, water-conserving materials, and devices that reflect current technology. The City shall review, and as appropriate, develop water conservation programs for public facilities (Civic Center, parks, maintenance yards, etc.). Water conservation measures and activities will continue.

Health & Safety Programs

Section 1092 of Title 25, Chapter 1, Subchapter 1, Article 4, of the California Administrative Code includes noise insulation standards, which detail specific requirements for new multi-family structures (hotels, motels, apartments, condos, and other attached dwellings) located within the

Implementation Element

60 CNEL contour adjacent to roads, railroads, rapid transit lines, airports or industrial areas. An acoustic analysis is required showing that these multi-family units have been designed to limit interior noise levels with doors and windows closed to 45 CNEL in any habitable room. Title 21 of the California Administration Code (Subchapter 6, Article 2, and Section 5014) also specifies that multi-family attached units incorporate noise reduction features sufficient to assure that interior noise levels in all habitable rooms do not exceed 45 CNEL.

Section 65302(f) of the Government Code specifies that it is the responsibility of the local agency preparing the general plan to specify the manner in which the noise element will be integrated into the zoning plan and tied to the land use element, circulation element, and the local noise ordinance. The noise element, once adopted, also becomes the guideline for an exemption is made, for railroads where there are no nighttime (10pm to 7am) operations and where, daytime (7am to 10pm) operations do not exceed four per day.

Determining compliance with the State noise insulation standards discussed above. The Office of Noise Control, established by the California Noise Control Act of 1973, has developed criteria and guidelines for local agencies for use in setting standards for human exposure to noise and preparing noise elements. The noise standards developed by the Office of Noise Control and intended as guidelines for municipal noise elements.

Each locality, in developing a Noise Element, must make a determination regarding how much noise is too much. A community's sensitivity to noise may be taken into account by starting with the general guidelines and then applying the adjustment factors shown in Table ill-4, which allows acceptability standards to be set which reflect the desires of the community and its assessment of the relative importance of noise pollution, and (2) are below the known levels of health impairment.

The following programs will either be continued or implemented as part of this General Plan:

- Building Code Review. The City will periodically review, and if necessary, modify the Uniform Building Code (UBC) to reflect current technology and regulations. Procedures for the periodic review of the UBC will be identified by the Community Development Director. Review will be undertaken by designated individuals to identify appropriate changes that should be considered. Following this review, amendments to the City's Building Code will be made, as required.

- Code Enforcement A significant cause of damage, injury, and loss of life to fire involves unsafe structures with poor or obsolete wiring or construction materials. The Building Code contains regulations regarding construction techniques and materials that may be effective in eliminating or reducing the spread of fire. Code enforcement will also ensure that the City's noise control ordinance is adhered to. For this reason, ongoing code enforcement efforts are an important implementation program within the Safety Element.

- Disaster Response Database. In the event of a major earthquake or other major disaster, persons living or working in the City may need to be self-sufficient for up to 72 hours before the results of any major relief efforts are realized. Under this program, a database will be created to identify medical professionals, heavy equipment operators, and volunteers trained in first aid and search-and-rescue. The database would identify other volunteers that would staff emergency collection centers

assist in the recovery efforts. This information, and the appropriate procedures, would then be incorporated into the City's Emergency Preparedness Plan.

- Fire Prevention. The City shall continue to work with the Fire Department to promote fire prevention and fire safety programs. The City shall also encourage periodic inspections of existing structures by the Fire Department for compliance with fire safety standards and practices. All new development plans must be submitted to the Fire Department for review and comment during the plan check process. This review must be completed for the development process to continue. New development must conform to any applicable standards and regulations.

- Hazardous Materials Control The City shall continue to cooperate with County, State, and Federal agencies involved in the regulation of hazardous materials' storage, use, and disposal. The City shall work with the Fire Department in requiring hazardous materials users and generators to identify safety procedures for responding to accidental spills and emergencies. The Fire Department shall also work with local law enforcement officials in regulating the transport of hazardous materials through the City. The City will continue to promote the safe disposal of "hazardous and toxic substances" used in private households through the support of "Hazardous Materials Collections" conducted at specific locations and times within the City.

- Police & Fire Services Review The City shall regularly review the adequacy of law enforcement services, fire protection, and emergency services in the City. This review effort shall be a component of the annual budget review of the contract with the Departments, and the City shall work with the County Sheriff's Department and the Fire Department to correct any identified deficiencies. Local law enforcement officials and Fire Department representatives shall also continue their review of any proposed development plans. Annual reports concerning each Department will be submitted to the City Council for consideration.

- Environmental Review. The City shall continue to evaluate the environmental impacts of new development and provide mitigation measures prior to development approval, as required by the California Environmental Quality Act (CEQA). The environmental review shall be provided for major projects and those that will have a potential to adversely impact the environment. Issue areas related to public safety that may be addressed in the environmental analysis include: earth and geology, risk of upset, public services, and flood risk. In compliance with CEQA, the City shall also assign responsibilities for the verification of the implementation of mitigation measures. The City's environmental review procedures are in place.

- Emergency Preparedness Plan. The City currently maintains a Multi-Hazard Functional Plan that outlines responsibilities and procedures the City will follow in the event of an emergency or Citywide disaster. Specific emergency functions and operations, available resources (fire stations, emergency shelters, hospitals and clinics, resource persons, etc.), and mutual aid agreements are described in the Plan. The City shall regularly update its Multi-Hazard Functional Plan for Emergency Operations.

- Fire Safety Development Review Program. Certain design standards have been established by the City of Paramount and the Fire Department to ensure that site planning and building design consider public safety and fire prevention. These standards include requirements governing emergency access, roadway widths, clearance around structures, location of fire hydrants, etc.

City of Paramount Boundary Map