City of Burbank

All-Hazard Mitigation Plan

January 2005

Table of Contents

EXECUTIVE SUMMARY

SECTION 1 – Introduction

Summary ***6***
Definition of Hazard Mitigation ***6***
Purpose of the Plan ***7***
Mission Statement ***7***
Plan Adoption ***8***
Process *8*
Resolution 8
Legal Authority ***10***
Federal Laws *10*
State Laws *10*

SECTION 2 – Planning Process

Hazard Mitigation Planning Participation ***11***
Steering Committee Members *11*
Adjunct Contributors 11
Hazard Mitigation Planning Committee By-laws ***11***
Hazard Mitigation Tasks ***12***
Hazard Mitigation Planning Goals and Objectives ***13***
Goals *13*
Objectives *13*
Hazard Mitigation Planning Public Participation ***14***
Public Questionnaire (English) *15*
Public Questionnaire (Español) *17*
Results of Public Questionnaire *19*
Adjacent Jurisdiction Participation *20*
Solicitation of Planning Support from Bob Hope Airport *21*
Hazard Mitigation Planning Team Meeting Minutes ***22***

SECTION 3 - Demographics & Statistics

History ***48***
General Data ***55***
Structure of Government ***62***
Elected Officials *63*
City Administration *66*
Departments & Responsibilities *66*
General Facilities ***91***
Inventory of Assets ***93***
Critical Assets ***127***
Special Districts, Services ***128***
Burbank Unified School District *(See Appendix 1, Burbank Unified School District Hazard Mitigation Plan)* *128*
School Site Map *(Including Private Schools)* *129*
Utilities ***130***
Water - Burbank Water & Power 130
Electric - Burbank Water & Power 130

Gas 130
Telephone 130
Health Care 130
Hospitals in the City of Burbank 130
Other Hospitals/Medical Centers Near Burbank 130
Higher Education 131
Colleges/Universities in the City of Burbank 131
Colleges/Universities with Over 2000 Students Nearest to Burbank 131
Business & Industry 132
Employers 132
Media 132
Employment 133
Transportation 135
Freeways/Major Highways 135
Railways 135
Airports 136
Mass Transit 136
Community Services 136
Community Parks and Recreation Programs 136
Special Services 138
Community-based Organizations 139
Climate 144
Local Meteorology 144
Threatened & Endangered Species 145

SECTION 4 – Hazard Vulnerablity Analysis

Definitions for Hazard Prioritization 146
Hazard Ratings 147
Prioritization of Hazard Matrix Results 148
Stakeholder Prioritization 148
Earthquake 149
Burbank Quadrangle Seismic Hazard Zone Map 150
Background Information and Terminology 152
Seismic Hazards Analysis 156
Ground Shaking Hazard Management 161
Fault Rupture Hazard 162
Verdugo Fault Zone Hazard Analysis 166
HAZUS Studies 168
Liquefaction Hazard 182
Vulnerability of the City to Seismic Hazards 186
Water Storage Facilities and Supply Network 186
Reservoirs 186
Water Tanks 187
Water Supply Network 187
Hospital Facilities 188
Transportation/Circulation Facilities 189
Natural Gas Facilities and Petroleum Pipelines 190
Electrical Power Facilities 191
Wastewater Disposal System 192
Potentially Hazardous Buildings 193
Earthquake Hazard Mitigation 194
Building and Fire Codes Enforcement 195
Seismic Hazard Overlay 196

Building Safety - Hazardous Building Abatement Programs *196*
Hazard Reduction Incentives Programs *197*
Seismic Retrofit Ordinance *198*
Infrastructure/Lifeline Programs *201*
Real Estate Disclosure *201*
Post-Earthquake Reconstruction Ordinance *202*
Seismic Safety Policies *202*
Transportation Accident* *206
Aircraft Incidents *206*
Rail Incidents *207*
Trucking Incidents *209*
Specific Situation *209*
Major Truck Routes Maps 210
Highway Incidents *211*
Transportation Loss* *212
Roads, Road Miles, Motor Vehicles, & Drivers in L.A. County *212*
Transportation Map 1 – North Burbank *213*
Transportation Map 2 – South Burbank *214*
Mass Transit *215*
Rail 216
Alameda Corridor Project 216
Air Transportation 217
Wild Land/Urban Interface Fires* *218
Levels of Wildland Fire Protection Services *218*
Wildland Fire Protection Fiscal Issues *219*
Fire-Safe and Land Use Planning *219*
Fire History *220*
Wild Fires of 2003 ..... *222*
Prevention & Safety *225*
City of Burbank Fire Hazard Analysis *225*
Wildland Fires 226
Fire Hazard Response 226
Fire Hazard Mitigation *228*
Fire Safety Policies *228*
Wildfire Smoke *229*
Smoke Hazards as a Result of Wildland Fires *230*
Sensitive Populations 230
Terrorism & Weapons of Mass Destruction (WMD)* *237
Threat Analysis *237*
Impact On The Community *240*
Bioterrorism *242*
Los Angeles County Terrorism Early Warning (TEW) Group *244*
Utility Loss/Disruption/Substation* *245
The Impact of Loss of Power on Water & Sewer Systems *245*
The Effects on Public Health & Safety *245*
Mitigation Measures Available for These Systems *248*
Water/Waste Water Disruption* *249
Water *249*
Water Sheds *251*
The Small Watershed Program in California - PL 83-566 and PL 73-534 ..... *252*
Ground Water *253*
Threats to Groundwater *257*
Mitigation *259*
Wastewater *269*

Hazardous Materials Incidents ***271***
Hazard Analysis *271*
Transportation-Related Hazards 271
Hazardous Materials Incident Response *275*
Hazardous Materials Incident Mitigation *276*
Hazardous Materials Policies *277*
Aviation Disaster ***278***
Airport Disaster Response *280*
Specific Situation *281*
Airport Hazard Mitigation *283*
Airport Safety Policies *283*
Map of Airport Locations *284*
Severe Weather/Destructive Winds ***285***
Windstorms *285*
Santa Ana Winds *285*
Existing Mitigation *287*
El Niño Weather Phenomenon *288*
Impact on the City of Burbank *292*
Explosions ***296***
Explosion Hazards 297
Explosion Consequences 298
Economic Disruption ***299***
Recession *299*
Government Perceptions *300*
Overall Outlook *301*
State Budget Deficit and Local Tax Increases *302*
Floods ***303***
Flood Hazard Mitigation *303*
Flood Safety Policies *304*
Civil Unrest ***305***
History of Civil Unrest in Los Angeles County *307*
Gangs in Los Angeles County *314*
Dam Failure ***315***
Specific Situation *315*
Emergency Response Actions *315*
Special Events ***316***
Major Studios 316
Nearby Theme Parks 316
Local Events 316
Sinkholes ***317***
Sinkholes *317*
Hydro-compaction *317*
Volcanic Activity ***318***
Drought ***319***
Estimated Potential Losses for High & Moderate Natural Hazards ***322***

SECTION 5 - Hazard Mitigation Strategies

Mitigation Goals and Objectives ***323***
Identification and Prioritization of Mitigation Actions ***323***
Strategy Synopsis Matrix ***324***
Strategies ***328***
All Hazards (AH) *328*
Earthquake (EQ) *347*

Transportation Accidents (TA) *356*
Wildland Urban Interface Fire (WF) *358*
Terrorism and Weapons of Mass Destruction (WT) *362*
Water/Waste Water Loss (WW) *363*
Hazardous Materials (HM) *364*
Aviation Disaster (AD) *356*
Severe Weather (SW) *368*
Flood (FL) *373*

SECTION 6 - Future Plans & Actions

Long-term Goals, Objectives and Actions* *374
Long Term Goals *374*
Long Term Objectives and Actions *375*
Future Goals and Objectives *376*
Prioritization and Implementation of Action Items *378*
Capabilities Assessment* *380
Existing Institutions, Plans, Policies and Ordinances *380*
Administrative & Technical Capacity 380
Regulatory Tools 381
Fiscal Resources 382

SECTION 7 - Plan Maintenance

Monitoring, Evaluating & Updating* *383
Continued Public Involvement* *383
Glossary of Acronyms* *385

APPENDIX 1 – Burbank Unified School District Hazard Mitigation Plan

Section 1 – Introduction

Summary

To summarize, this document contains:

- The City of Burbank Hazard Vulnerability Analysis;
- Prioritization of City of Burbank 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 Burbank Multi-Hazard Mitigation Planning Team, 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 Burbank Multi-Hazard Mitigation Planning Team 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 Burbank 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.

Hazard 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 the Plan

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

This plan identifies and evaluates specific strategies to be considered by the City of Burbank 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 Burbank Multi-Hazard Mitigation Planning Team 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 further developed for funding and implementation by the 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 Burbank 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.

Mission Statement

The City of Burbank is a special urban community. It is here that residents find tranquil neighborhoods, peace in their homes, and protection from the potentially negative aspects of major industry and population densities. Our high quality of life and level of municipal services are achieved by preserving and enhancing the City's economic prosperity, while enhancing and preserving residential neighborhoods.

It is the mission of the City government to balance this desire for traditional values and lifestyles with contemporary and fiscally responsible municipal service while moving to the future with thoughtful and stable economic progress, within a system of government that respects legitimate differences of opinion.

Plan Adoption

Process

The City of Burbank Hazard Mitigation Planning Team recommended that the Burbank City Council adopt the City of Burbank All Hazard Mitigation Plan during a regularly scheduled Burbank City Council Meeting and that a Resolution be prepared to document its adoption.

On March 3, 2005, the Council of the City of Burbank voted unanimously voted to adopt the resolution. The Resolution Document is below:

Resolution

RESOLUTION NO. 26,925

A RESOLUTION OF THE COUNCIL OF THE CITY OF BURBANK ADOPTING THE ALL-HAZARD MITIGATION PLAN AND AUTHORIZING THE CITY MANAGER TO IMPLEMENT THE PLAN.

904-2

THE COUNCIL OF THE CITY OF BURBANK FINDS:

A. Section 203 of the Robert T. Stafford Disaster Assistance and Emergency Relief Act, 42 USC, as amended by Section 102 of the Disaster Mitigation Act of 2000, requires all state and local governments to develop comprehensive mitigation plans as a condition of eligibility for future post-disaster mitigation grants after November 4, 2004.

B. The City Manager created a Hazard Mitigation Planning Team which received input from the community and adjacent jurisdiction, during the preparation of the All-Hazard Mitigation Plan.

C. The All-Hazard Mitigation Plan satisfies all the requirements under the law.

THE COUNCIL OF THE CITY OF BURBANK RESOLVES:

1. The City of Burbank All-Hazard Mitigation Plan ("Plan") as submitted to the Council and incorporated by this reference, is approved.

2. The City Manager, or her designee is authorized to submit the Plan and all necessary documents to the Federal Emergency Management Agency (FEMA), the State Office of Emergency Services, and any other appropriate government entity. Finally, in the event changes or modifications are requested by any agency, the City Manager, or her designee, is authorized to make such changes as to resubmit the document.

3. The City Manager or her designee is authorized to implement the Plan once accepted by FEMA and to evaluate the Plan annually with the Hazard Mitigation Planning Team in accordance with Section 7 of the Plan, and make updates as necessary. Every five years the Plan shall be submitted to the appropriate government entities for the review. Any updates or notification to the Plan shall be provided to the City Clerk.

4. The City Clerk shall maintain this plan as a permanent record.

PASSED and ADOPTED this 8th day of March, 2005.

s/Marsha R. Ramos
Marsha R. Ramos
Mayor of the City of Burbank

Attest:

s/Margarita Campos
Margarita Campos, City Clerk

Approved as to Form and Legal Content
Dennis A. Barlow, City Attorney

Mary F. Riley
By: Mary F. Riley, Senior Assistant City Attorney

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

I, Margarita Campos, City Clerk of the City of Burbank, do hereby certify that the foregoing Resolution was duly and regularly passed and adopted by the Council of the City of Burbank at its regular meeting held on the 8th day of March 2005, by the following vote:

AYES: Council Members Campbell, Golonski, Mruphy, Vander Borght and Ramos.

NOES: Council Members None.

ABSENT: Council Members None.

s/Margarita Campos
Margarita Campos, City Clerk

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 City eligible for funding and technical assistance from state and federal hazard mitigation programs.

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 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)

Section 2 – Planning Process

Hazard Mitigation Planning Participation

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Hazard Mitigation Planning Committee By-laws

Planning Team Hazard Mitigation By Laws

1. The CITY OF BURBANK ALL-HAZARD MITIGATION PLANNING Team is represented by members from the City of Burbank.

2. The CITY OF BURBANK ALL-HAZARD MITIGATION PLANNING Team agrees to make and pass policy recommendations by a vote of a simple majority of those members present at the scheduled meeting.

3. Members of the CITY OF BURBANK All-Hazard Mitigation Planning Team agree to meet bi-monthly to identify hazard priorities and review, identify and implement CITY OF BURBANK'S hazard mitigation strategy recommendations.

4. Any single Hazard Mitigation Planning Team member may request, at a scheduled meeting of the CITY OF BURBANK All-Hazard Mitigation Planning Team, an adoption of, or amendment to any part of the plan or process.

5. The CITY OF BURBANK All-Hazard Mitigation Planning Team was organized in June 2004, as reflected by the minutes of that meeting, and agreed to meet bi-monthly to identify hazard vulnerabilities and feasible hazard mitigation strategy recommendations.

6. The CITY OF BURBANK All-Hazard Mitigation Planning Team may form subcommittees to review and develop those feasible hazard mitigation strategy recommendations identified that will be reviewed by the Hazard Mitigation Planning Team as a whole.

7. The 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 inter-city jurisdictions, private citizens and organizations.

8. The CITY OF BURBANK Planning Team will identify constraints to mitigation strategies that affect represented jurisdiction's ability, authority and responsibility to implement those strategies.

9. Public input will be implemented through the use of a specially prepared Hazard Mitigation and Preparedness Questionnaire as well as at community forums, City Council Meetings and solicitation via other community disaster preparedness-related organizations.

Hazard Mitigation Tasks

1. Coordinate multi-hazard mitigation planning tasks and activities with the city's staff and departments to develop an all-hazard disaster mitigation plan and support the CITY OF BURBANK All-Hazard Mitigation Planning Team's co-chairs oversight of the planning process.

2. Assist in carrying out the goals and objectives of the CITY OF BURBANK All-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 and in proximity to those owned by the CITY OF BURBANK 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 BURBANK All-Hazard Mitigation Planning Team.

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 each jurisdiction's Comprehensive Emergency Management Plan and General Plan Safety Element.

9. Provide for the implementation of Planning Team decisions.

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

11. Establish Hazard Mitigation Planning Team 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

Hazard Mitigation Planning Goals and Objectives

Goals

1. Support the priorities of each jurisdiction/City; their mandates, employees, students, citizens and the business community.

2. Promote economic development strategies consistent with seismic, floodplain and risk management guidance as developed by each jurisdiction/City and its agencies and/or organizations.

3. Provide for an effective public awareness program for natural and technological hazards present in the represented jurisdictions/City.

4. Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to each jurisdiction/City.

5. Promote the recognition of the real value of hazard mitigation to public facilities, public safety and welfare of all citizens of the respective jurisdiction/City.

6. Support the mitigation efforts of local governments, private citizens, non-profit organizations and private businesses throughout.

Objectives

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

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

3. Identify mitigation strategies that will allow each jurisdiction/City 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 jurisdictional/City Departments, Organizations and Agencies that have an interest in mitigation of specific hazards.

7. Develop a standard mitigation program utilizing authorities, policies and programs of each jurisdiction/City.

8. Organize, train and maintain an effective and ongoing CITY OF BURBANK All-Hazard Mitigation Planning Team that will facilitate implementation of the CITY OF BURBANK All-Hazard Mitigation Plan.

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

10. Gain support of the administration for the CITY OF BURBANK All-Hazard Mitigation Plan implementation.

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

12. Encourage identified hazard mitigation strategies as set forth in each jurisdiction's Safety Element of its General Plan or Master Plan and all other represented jurisdictional plans that contain Hazard Mitigation Strategies.

Hazard Mitigation Planning Public Participation

The City of Burbank Hazard Mitigation Planning Team aggressively sought input from adjacent jurisdictions and the community. A meeting was held early-on in the process to introduce the hazard mitigation planning project to the City of Burbank Disaster Council. At that time, the committee chair solicited support from all attendees.

Questionnaires were distributed at several public gatherings including:

- Community Disaster Committee
- Libraries
- City Council Chambers
- Public Works Department
- Community Development Department
- City Clerk's Office
- City Websute
- City Council Meeting (as announced by the Mayor)

Using the results of the questionnaires and incorporating input received at meetings and public gatherings, the Planning Team developed a list of hazards and the priority designating the risk each hazard poses to the City of Burbank (See Section 4).

Public Questionnaire (English)

The questionnaires were available in both English and Spanish (copies follow):

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
- ☐ 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: _____

Public Questionnaire (Español)

CUESTIONARIO DE ATENUACION Y PREPARACION EN CONTRA DE PELIGROS

Este cuestionario esta diseñado para ayudar al Proyecto de Planificación Local de Atenuación de Peligros identificando las inquietudes de la comunidad en cuanto a peligros naturales y los causados por humanos y para mejor entender las necesidades de la comunidad para reducir el riego y perdida por dichos peligros. El cuestionario debe de ser completado por un adulto, preferiblemente el propietario o el cabeza de la familia. Favor de tomar unos breve momentos para completar este cuestionario. Todas las respuestas son estrictamente confidenciales, y son solamente para el propósito de la investigación. Gracias.

1. Código postal: _____ Nombre de la comunidad o ubicación: _____¿Acceso al Internet? S/N ___ Dueño/Alquila_____

2. ¿Que tan preocupado esta por los siguientes desastres afectando su comunidad? Favor de dar una clasificación de prioridad a cada peligro: ***0 = No preocupado; 1 = Algo preocupado; 2 = Moderamente preocupado; 3 =Muy preocupado***

Natural:

Inundaciones	_____	Derrumbe/alud de barro	_____	Fuego	_____
Falla de dique	_____	Terremoto	_____	Falla de comunicaciones	_____
Vientos fuertes	_____	Biológico/Planta/Animal	_____	Incidente radiólogo	_____
Falla de presa	_____			Eventos extraordinarios	_____
Alerta de Salud/Epidemia	_____	**Causa Humana:**		Terrorismo	_____
		Perdida de Transportes	_____	Interrupción de Servicios Públicos	_____

3. ¿Que es el modo más efectivo para que reciba información sobre como hacer su familia y hogar seguro de desastres naturales? (**Favor de marcar *todo que procede***.)

Medios de difusión:

- ☐ Artículos periodísticos
- ☐ Anuncios periodísticos
- ☐ Noticiero de televisión
- ☐ Anuncios de televisión
- ☐ Noticiero de radio
- ☐ Anuncios de radio
- ☐ Libros
- ☐ Correo
- ☐ Departamento de bomberos
- ☐ Internet
- ☐ Informativa/folleto
- ☐ Iglesia/organización religiosa
- ☐ Empleador
- ☐ Reuniones públicas
- ☐ Institución universitaria o de investigación
- ☐ Cuentas de servicios públicos

Otros métodos:

- ☐ Escuelas
- ☐ Anuncios al aire libre (carteles, etc.)

4 En la siguiente lista favor de marcar las actividades que **ha hecho**, **planea en hacer** en el futuro cercano, **no ha hecho**, o **no puede hacer**. **(Favor de marcar solamente una actividad por cada actividad de preparación)**

Usted o alguien en su hogar:	Ha hecho	Planea Hacer	No ha hecho	No Puede
¿Asistió a reuniones o recibió información por escrito sobre desastres naturales o preparación para emergencias?	☐	☐	☐	☐
¿Hablado con la familia sobre que hacer en caso de desastre o emergencia?	☐	☐	☐	☐
¿Elaboró un "Plan de Emergencia Familia/en el Hogar para poder decidir que harán todos en el evento de un desastre?	☐	☐	☐	☐
¿Preparó "Provisiones para Desastre" (comida, agua, medicamentos, pilas, artículos de primeros auxilios o otras provisiones para emergencia?	☐	☐	☐	☐
¿Durante el último año, ha sido capacitado alguien en su familia en Primeros Auxilios o Resucitación Cardiopulmonar?	☐	☐	☐	☐

5.Preparando provisiones para desastre, recibiendo capacitación en Primeros Auxilios y elaborando un plan de emergencia son actividades de bajo costo que requieren un compromiso de su tiempo personal. ¿Cuánto tiempo (por año) esta dispuesto a dedicar a preparación para desastre/emergencia? **(Marcar una solamente)**

☐ 0-1 hora ☐ 2-3 horas ☐ 4-7 horas _8-15 horas ☐16+ horas ☐

6. ¿Consideró la posibilidad de un peligro natural cuando compro/se mudo a su casa actual?

☐ Si ☐ No

7. ¿Estaría dispuesto a gastar mas dinero en una casa que tiene características que la hacen más resistente a un desastre?

☐ Si ☐ No ☐ No sé

8. ¿Tiene seguro en contra de inundación? ¿Si responde que si que es el costo anual?
☐ Si ☐ No _____

9. ¿Estaría dispuesto a hacer su casa más resistente a desastres naturales?
☐ Si ☐ No

10. ¿Que modificaciones estructurales o no estructurales para terremotos o inundaciones ha hecho a su casa?
(**Favor de marcar todos que proceden**)

10a. No estructural
- ☐ Sujetar libreros, vitrinas a la pared
- ☐ Asegurar el calentador de agua a la pared
- ☐ Instalar pasadores a cajones/armarios
- ☐ Instalar aparatos de gas con conectadores flexibles
- ☐ Otros (favor de explicar)
- ☐ Ninguna

10b. Estructural
- ☐ Asegurar la casa a los cimientos
- ☐ Sujetar el interior de la pared de elemento corto
- ☐ Sujetar chimenea no reforzada
- ☐ Sujetar paredes de mampostería o de concreto a los cimientos

11. Desastres naturales y de causa humana pueden tener una impacto significante a una comunidad, pero planeando para estos eventos puede ayudar a reducir el impacto. Las siguientes afirmaciones nos van a ayudar a determinar prioridades de la comunidad para planear para estos peligros. Favor de indicar que tan importante es cada una para usted.

Afirmación	Muy Importante	Algo Importante	Neutral	No Muy Importante	No Es Importante
Proteger la propiedad privada	☐	☐	☐	☐	☐
Proteger instalaciones críticas (hospitales, redes de transportación, estaciones de bomberos)	☐	☐	☐	☐	☐
Prevenir el crecimiento en las zonas de peligro	☐	☐	☐	☐	☐
Proteger el ambiente natural	☐	☐	☐	☐	☐
Proteger hitos históricos y culturales	☐	☐	☐	☐	☐
Fomentar cooperación entre dependencias públicas, ciudadanos, organizaciones sin fines de lucro, y comercios	☐	☐	☐	☐	☐
Proteger y reducir daño a servicios públicos	☐	☐	☐	☐	☐
Fortaleciendo servicios de emergencia (policía, fuego, ambulancia)	☐	☐	☐	☐	☐

12. Favor de marcar la casilla que mejor indica de las siguientes estrategias de riesgo y perdida por desastres naturales.

Estrategias para toda la comunidad	De Acuerdo	Neutral	No De acuerdo	No Estoy Seguro
Apoyo un enfoque regulador para reducir el riesgo.	☐	☐	☐	☐
Apoyo un enfoque no regulador para reducir el riesgo.	☐	☐	☐	☐
Apoyo política para prohibir crecimiento en zonas sujetas a peligros naturales.	☐	☐	☐	☐
Apoyo el uso de dineros de impuestos locales para reducir riesgos y perdidas por desastres naturales.	☐	☐	☐	☐
Apoyo proteger estructuras históricas y culturales.	☐	☐	☐	☐
Estaría dispuesto a hacer mi casa más resistente a un desastre.	☐	☐	☐	☐
Apoyo pasa para salvaguardar de un desastre la economía local	☐	☐	☐	☐
Apoyo mejorar la preparación en contra de desastres en las escuelas.	☐	☐	☐	☐

Results of Public Questionnaire

The City of Burbank responses to the citizen questionnaire are compiled as follows:

1. The majority of respondents has internet access and owns their residence.

2. The respondents' concern about disasters affecting their community were:

    - Flood – very concerned
    - Levee Failure – not concerned
    - High Winds – moderately concerned
    - Dam failure – moderately concerned
    - Health Emergency – moderately concerned
    - Landslides – moderately concerned
    - Earthquake – very concerned
    - Biological – somewhat concerned
    - Hazardous Materials – moderately concerned
    - Rail Accident – moderately concerned
    - Aviation Accident – very concerned
    - Fire – very concerned
    - Telecommunications Failure – somewhat concerned
    - Radiological Incident – somewhat concerned
    - Special Events – somewhat concerned
    - Terrorism – moderately concerned
    - Utilities Interruption – moderately concerned

3. The majority of respondents receive information from television news. (newspaper stories second)

4. The majority of respondents responded to participating in disaster preparedness as follows:

    - Attend meetings & receive information – have not done
    - Talked with family members – have done
    - Develop a household emergency plan – have not done
    - Prepare a disaster supply kit –have not done
    - Been trained in emergency care – have not done

5. The majority of respondents are willing to spend 2-3 hours per year in disaster preparedness.

6. The majority of respondents did not consider the occurrence of a natural hazard when they moved into their home.

7. The majority of respondents would be willing to spend more money on a safe home.

8. The majority of respondents do not carry flood insurance.

9. The majority of respondents would be willing to make their home more disaster resistant.

10. The majority of respondents has made non-structural modifications and has not made structural modifications to their homes to make them more disaster resistant.

11. The majority of respondents prioritize disaster preparedness in the following manner:

    - Protecting Property – very important
    - Protecting Critical Facilities – very important
    - Preventing Development in Hazard Areas – very important
    - Protecting Environment – very important
    - Protecting Landmarks – somewhat important
    - Promoting Cooperation – very important
    - Protecting Utilities – very important
    - Strengthening Emergency Services – very important

12. The majority of respondents offered the following opinions on strategies to reduce risk:

    - Support regulatory approach – Disagree
    - Support non-regulatory approach – Neutral
    - Support development prohibition policies – Agree
    - Support use of tax dollars – Agree
    - Support protecting historical structures - Neutral
    - Willing to make their home more resistant – Agree
    - Support steps to safeguard economy – Agree
    - Support improving disaster preparedness in schools – Agree

Adjacent Jurisdiction Participation

The City of Burbank strove to solicit input from jurisdictions adjacent to its own. The Bob Hope Airport was asked, in a letter written by the City of Burbank Fire Chief, to review information integrated into this plan and to provide input and suggestions pertaining to the mitigation of any identified airport-related hazards. (See Aviation Disaster in Section 4.)

The Burbank Unified School District (BUSD) is closely tied to the City of Burbank. Its facilities serve only within the city limits. The City of Burbank recognizes the importance of maintaining a close working relationship with BUSD and, as such, has pledged to endorse and support the school district's own hazard mitigation plan by incorporating it as an appendix (APPENDIX 1) to this plan.

Solicitation of Planning Support from Bob Hope Airport

January 3, 2005

Mr. Dios Marrero, Executive Director
Bob Hope Airport
Burbank-Glendale-Pasadena Airport Authority
2627 Hollywood Way
Burbank, Ca. 91505

Dear Mr. Marrero:

Re: The City of Burbank's Disaster Mitigation Plan

The Federal Government promulgated the Disaster Mitigation Act of 2000 (DMA 2000) which requires all local government agencies to prepare a Disaster Mitigation Plan that includes a Hazard Vulnerability Analysis and specific Hazard Mitigation Strategies. The DMA 2000 identifies new requirements for Hazard Mitigation Grant (HMPG) funds to be used in planning activities, and increases the amount of HMCP funds available to states and local agencies that have adopted a comprehensive, enhanced mitigation plan prior to a disaster. The DMA 2000 also requires that states and local agencies must have an approved mitigation plan in place prior to receiving post-disaster HMGP funds.

Last year, the City of Burbank initiated the DMA 2000 planning process with the formation of a Steering Committee and the retention of a consultant to assist in preparing a Disaster Mitigation Plan that will meet the Federal requirements. Representatives from the Bob Hope Airport, along with other community stakeholders, participated in an initial orientation meeting. As a direct result of that and many subsequent meetings, we now have a draft Hazard Vulnerability Analysis identifying potential high priority hazards, including the airport. The draft plan also includes numerous hazard mitigation strategies to mitigate the hazards identified in the vulnerability analysis. I have attached a copy of the Aviation Disaster Section from the draft along with a copy of the mitigation strategies.

I wholeheartedly encourage you to review these attachments and provide comments. Input from you and your staff is both needed and valued. In particular, I would be very interested in hearing any suggestions pertaining to the mitigation of any identified airport related hazards. History has demonstrated that major incidents involving the airport can occur. While not all incidents are preventable, in most cases, with proper pre-planning, we can mitigate the severity of their consequences. Through our collaborative work on this plan we will be protecting both our customers as well as the citizens of this community.

Due to the sense of urgency of this plan, I would kindly ask that you provide any input you might have within two weeks of the date of this letter. Once your input is received, it will be shared with out DMA 2000 Steering Committee and the results will be incorporated into the final draft of the plan to be approved by the Burbank City Council. If you have any questions please contact either me or Rich Baenen, our Disaster Preparedness Coordinator at (818) 238-3350.

Sincerely,

Rick Mehling
Fire Chief

RM:RB:rm

Attachments

Hazard Mitigation Planning Team Meeting Minutes

City of Burbank Hazard Mitigation Planning Team Committee
Kick Off Meeting
1845 North Ontario Street
City of Burbank, CA 91502
June 21, 2004

Meeting Called to Order

First meeting of the City of Burbank Hazard Mitigation Planning Team called to order at 1:10 p.m.

Introductions

Planning Team Attendees:

Name	Department	Phone	Email
Roger Baker	Deputy City Planner	818.238-5278	rbaker@ci.burbank.ca.us
Jennifer Wyatt	IT Director	238-5091	jwyatt@ci.burbank.ca.us
Derek Hanway	Financial Ser. Director	238-5500	dhanway@ci.burbank.ca.us
Mike Davis	Fire Department	238-3480	mdavis@ci.burbank.ca.us
Bruce Feng	Public Works/Cap.Project	238-3804	bfeng@ci.burbank.ca.us
Greg Simay	Asst. Gen. Mgr. BWP	238-3559	gsimay@ci.burbank.ca.us
Walt Bratton	Director-PRCS Dept	238-5310	Wbratton_wa@ci.burbank.ca.us
Tom Hoefel	Police Chief	238-3200	thoefel@ci.burbank.ca.us
Peter Sio	IT Manager	238-5082	psio@ci.burbank.ca.us
Betsy Dolan	Admin Asst City Manager	238-5823	edolan@ci.burbank.ca.us
Penny Forbes	Admin Analyst	238-3920	pforbes@ci.burbank.ca.us
Justin Hess	Dep. Financial Ser. Dir	238-5487	jhess@ci.burbank.ca.us
Mary Riley	Sr. Asst. Legal Service	238-5714	mriley@ci.burbank.ca.us
Rich Baenen	Emergency Ser. Coord.	238-3350	rbaenen@ci.burbank.ca.us
Jan Rogala	Dimensions/Consultant	707.374-6529	janrogala@aol.com
Theresa Hayes	Dimensions/Consultant	626.286-8305	Theresa@dimensionsui.com

DMA 2000 Overview

Jan Rogala gave a 35 minute overview of the Disaster Mitigation Act of 2000 (DMA 2000) planning process.

New Business

The committee elected to call itself the City of Burbank Hazard Mitigation Planning Team. Mike Flad will serve as chairperson and Rich Baenen and Roger Baker will serve as co-chairs. The committee agreed to meet on Thursday at 1:30 bi-monthly. The meeting will be conducted in the City of Burbank's Fire Department Conference Room located at 1845 N. Ontario Street.

Planning Team Hazard Mitigation By Laws

1. The CITY OF BURBANK ALL-HAZARD MITIGATION PLANNING Team is represented by members from the City of Burbank.

2. The CITY OF BURBANK ALL-HAZARD MITIGATION PLANNING Team agrees to make and pass policy recommendations by a vote of a simple majority of those members present at the scheduled meeting.

1

City of Burbank Hazard Mitigation Planning Team Committee
Kick Off Meeting
1845 North Ontario Street
City of Burbank, CA 91502
June 21, 2004

3. Members of the CITY OF BURBANK All-Hazard Mitigation Planning Team agree to meet bi- monthly to identify hazard priorities and review, identify and implement CITY OF BURBANK'S hazard mitigation strategy recommendations.

4. Any single Hazard Mitigation Planning Team member may request, at a scheduled meeting of the CITY OF BURBANK All-Hazard Mitigation Planning Team, an adoption of, or amendment to any part of the plan or process.

5. The CITY OF BURBANK All-Hazard Mitigation Planning Team was organized in June 2004, as reflected by the minutes of that meeting, and agreed to meet bi-monthly to identify hazard vulnerabilities and feasible hazard mitigation strategy recommendations.

6. The CITY OF BURBANK All-Hazard Mitigation Planning Team may form subcommittees to review and develop those feasible hazard mitigation strategy recommendations identified that will be reviewed by the Hazard Mitigation Planning Team as a whole.

7. The 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 inter-city jurisdictions, private citizens and organizations.

8. The CITY OF BURBANK Planning Team will identify constraints to mitigation strategies that affect represented jurisdiction's ability, authority and responsibility to implement those strategies.

9. Public input will be implemented in the following manner: *To be decided*

Hazard Mitigation Tasks

1. Coordinate multi-hazard mitigation planning tasks and activities with the city's staff and departments to develop an all-hazard disaster mitigation plan and support the CITY OF BURBANK All-Hazard Mitigation Planning Team's co-chairs oversight of the planning process.

2. Assist in carrying out the goals and objectives of the CITY OF BURBANK All-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 and in proximity to those owned by the CITY OF BURBANK 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 BURBANK All-Hazard Mitigation Planning Team.

6. Review mitigation planning drafts, recommendations and updates.

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

2

City of Burbank Hazard Mitigation Planning Team Committee
Kick Off Meeting
1845 North Ontario Street
City of Burbank, CA 91502
June 21, 2004

8. Integrate the plan with all phases of each jurisdiction's Comprehensive Emergency Management Plan and General Plan Safety Element.

9. Provide for the implementation of Planning Team decisions.

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

11. Establish Hazard Mitigation Planning Team 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

Hazard Mitigation Planning Goals and Objectives

Goals

- Support the priorities of each jurisdiction/City; their mandates, employees, students, citizens and the business community.
- Promote economic development strategies consistent with seismic, floodplain and risk management guidance as developed by each jurisdiction/City and its agencies and/or organizations.
- Provide for an effective public awareness program for natural and technological hazards present in the represented jurisdictions/City.
- Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to each jurisdiction/City.
- Promote the recognition of the real value of hazard mitigation to public facilities, public safety and welfare of all citizens of the respective jurisdiction/City.
- Support the mitigation efforts of local governments, private citizens, non-profit organizations and private businesses throughout.

3

City of Burbank Hazard Mitigation Planning Team Committee
Kick Off Meeting
1845 North Ontario Street
City of Burbank, CA 91502
June 21, 2004

Objectives

- Identify mitigation actions to reduce loss of lives and property.
- Implement mitigation actions that are feasible, to reduce loss of lives and property.
- Identify mitigation strategies that will allow each jurisdiction/City 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 jurisdictional/City Departments, Organizations and Agencies that have an interest in mitigation of specific hazards.
- Develop a standard mitigation program utilizing authorities, policies and programs of each jurisdiction/City.
- Organize, train and maintain an effective and ongoing CITY OF BURBANK All-Hazard Mitigation Planning Team that will facilitate implementation of the CITY OF BURBANK All-Hazard Mitigation Plan.
- Review and update other jurisdictional programs to identify current and future mitigation goals and objectives in compliance with city, county, state and Federal requirements.
- Gain support of the administration for the CITY OF BURBANK All-Hazard Mitigation Plan implementation.
- Achieve the overall goal of developing a comprehensive mitigation program with Federal, state, represented jurisdictions and other appropriate adjacent jurisdictions.
- Encourage identified hazard mitigation strategies as set forth in each jurisdiction's Safety Element of its General Plan or Master Plan and all other represented jurisdictional plans that contain Hazard Mitigation Strategies.

The team adopted the bylaws, tasks, objectives, and goals. Other jurisdictions might join the City of Burbank's Hazard Mitigation Plan. Jan reiterated that these items can be revisited at any time and added too, edited or changed. The team agreed to an all-hazard mitigation plan.

The City of Burbank owns and operates their police, fire, water, and sanitation departments. The City of Burbank contracts with the Los Angeles County Department of Health Services.

4

City of Burbank Hazard Mitigation Planning Team Committee
Kick Off Meeting
1845 North Ontario Street
City of Burbank, CA 91502
June 21, 2004

Data

A copy of the City of Burbank's PEPIP-CA Property Schedule was provided to Dimensions.

The team discussed the City of Burbank's documents.

Capability Assessment

The State of California is requiring capability assessments be included in the plan. This means that the jurisdiction needs to examine the local laws to ensure they are appropriate for the risk posed. The city will need to determine their capabilities, such as financial, staffing, and expertise to mitigate risks.

Public Input

The team discussed methodologies for gathering public and business input. A meeting with the Disaster Council has been planned for August 18, 2004. The Disaster Council is represented by non-profit organizations, private local businesses, and government departments.

Next Meeting Agenda Items

- Hazard Risk Analysis Matrix
- Data
- Public Input
- Identify hazards

Meeting adjourned at 2:55 p.m.

5

City of Burbank
Hazard Mitigation Planning Team Committee Meeting
July 15, 2004 ***(Corrected Copy)***

Meeting called to order

Meeting called to order at 1:35 pm

Introductions

Those in attendance

1. Roger Baker rbaker@ci.burbank.ca.us
2. Kim Withers kwithers@ci.brubank.ca.us
3. Jennifer Wyatt jwyatt@ci.burbank.ca.us
4. Peter Sio psio@ci.burbank.ca.us
5. Betsy Dolan edolan@ci.burbank.ca.us
6. Penny Forbes pforbes@ci.burbank.ca.us
7. Rick Mehling rmehling@ci.burbank.ca.us
8. Rich Rogala rich@dimensionsui.com
9. Jan Rogala JanRogala@aol.com

Chief Mehling had some initial questions about multi-jurisdictional possibilities with the School District and the Airport. Jan said that it would benefit to have participation from those jurisdictions in the committee, even thought they choose not to participate in the development of a multi-jurisdictional plan.

All future meetings will be held at fire headquarters due to conflicts with the Fire Training Center.

Minutes from June 21 Meeting

The meeting schedule published in the minutes was discussed and it was decided that Theresa from Dimensions will send out meeting notices a week prior to the meeting.

A discussion on whether the team would retain Mike Flad as chair of the team. Rich Baenen and Roger Baker will take care of chairing any meetings Mr. Flad will not be able to attend.

Pg 4 last paragraph – should include Electric Utilities in the listing of owned services (Burbank Water & Power).

Chief Mehling asked whether other jurisdictions not complying in time with the law will affect the ability of the city to be eligible for funding (disaster mitigation/recovery). Jan explained that those not in compliance by Nov 1 would not be eligible for Hazard Mitigation Grants (pre and post) until they comply, but this will not affect Public Assistance Recovery funds post-disaster.

Roger asked if the quality and content of other plans would affect the city's plan. Jan said that those other jurisdictions are separate and distinct and should not affect the City of Burbank's plan.

Other changes as noted on Master Copy of those minutes.

1

City of Burbank
Hazard Mitigation Planning Team Committee Meeting
July 15, 2004 *(Corrected Copy)*

	The team adopted the minutes as corrected.
Review By Laws, Objectives, Tasks and Goals	Completed as part of the Minutes review.
Hazard Matrices	The team did not receive the matrices. The consultant will see they are sent to team members and requests that they be filled out before the next meeting.
Public Input	Jan discussed several methodologies for complying with the public input portion of the planning process. Roger discussed the necessity to give public participants a pre-notice on the availability of this information. Jan said that the city is only required to contact these groups and give them the opportunity to attend and comment. Roger asked how to best manage this within the confines of time and resources available for community input. Jan explained the questionnaire tact that other jurisdictions are using. Rich reported that the LA County Office of Ed received a post card from the State OES advising them that the draft state plan is posted on a website and invited comment by going to the website and following the instructions there. Jan explained how public input is incorporated into the plan… not as changes to what the team develops but as additions and documentation of public concerns. The input is written down and brought back to the team to be considered. Jan said that there is no real rule of thumb on the best method for gathering public input. Jan said that public radio and public access TV are good mediums for getting the information out as well as mailing bulletins etc. Jan also said that the amount of information we get is also determined by the disaster of the day whether it's an earthquake or a wild fire. Roger asked if mailings are effective. Jan said that they generally work fairly well with a moderate response from the public. Roger asked the team what their feelings were on an effective methodology. The team discussed the last citizen survey resulted in a 60-70% return. Roger suggested that we post a questionnaire on the web, and advertise the fact that it is there on Community Access TV and radio and request input through electronic means. Jan said it would round out the issue if the public was invited to a public meeting and make time available for comment (regardless of time and location of the meeting). Kim suggesting targeting community disaster volunteers and BEARS (Ham Radio) organizations for input.

2

City of Burbank
Hazard Mitigation Planning Team Committee Meeting
July 15, 2004 *(Corrected Copy)*

It was agreed to use the web, target the groups discussed and consider the public meeting invitation.

The consultant will e-mail the Hazard Matrix and the Questionnaire to the team early next week. The team indicated that they would like to have the questionnaire in multi-lingual form (Spanish & English).

Data for Mitigation Strategies

Peter presented an updated boundary map. Other maps containing flood data and fault data are available from the planning department (Roger) and in the safety element of the general plan. Critical facilities and functions. Organizational structure and position definitions are in the general plan and on the web.

Jan requested that the team start thinking about developing mitigation strategies and documenting them. Much of this information is probably already identified in the form of projects. It is merely a matter of gathering the information and placing it into the plan as past, present and future mitigation strategies.

Penny reported that there are about 10 buildings currently undergoing seismic retrofitting. Jan said that those projects should be documented in the plan as a summary. Also some of the 'gap' funds are being used on work on the city sewer systems.

Any other projects of this nature should be documented in the plan also.

As a matter of the teams concern for security of sensitive data, Jan said that the Dimensions will put as much information as is available into the draft of the plan, present it to the team and then give it to the team to determine what will and will not be published for public, FEMA and City consumption. There was a discussion on how to identify information that may be sensitive (the kinds of things that would raise the vulnerability of facilities within the City).

Jan also discussed how we list constraints for strategies that show a need for recognition.

Adjourned

The meeting was adjourned at 3:00 PM

Documents Received

1. City of Burbank Zoning Map (3/18/2003)
2. Burbank Land Use Plan
3. Burbank General Plan Land Use Element
4. Burbank General Plan Circulation Element
5. Burbank General Plan Open Space/Conservation Element
6. Burbank General Plan Noise Element
7. Burbank General Plan Housing Element
8. Burbank General Plan Safety Element

3

City of Burbank
Hazard Mitigation Planning Team Committee Meeting
July 29, 2004

Meeting called to order	Meeting called to order at 1:40 pm	
Introductions	Peter Sio	psio@ci.burbank.ca.us
	Kim Withers	kwithers@ci.burbank.ca.us
	Roger Baker	rbaker@ci.burbank.ca.us
	Justin Hess	jhess@ci.burbank.ca.us
	Penny Forbes	pforbes@ci.burbank.ca.us
	Rich Rogala	rich@dimensionsui.com
	Gwen Indermill	gindermill@ci.burbank.ca.us
	Jan Rogala	janrogala@aol.com

OLD BUSINESS

Minutes from July 15th Meeting

Minutes approved with 3 additions and 2 changes

Meeting schedule reviewed and approved by the membership.

Hazard Matrices

Penny turned in a compiled form of input from her entire department. One other matrix received.

Jan explained what the purpose of the matrices is for. A quick review shows the following risks were priorities:

- Earthquake
- Bio Hazard
- Terrorism
- Wild Fire
- Utility Disruption
- Water-Waste Water
- Telecommunications

The actual results will be tabulated and e-mailed to the membership.

Jan reported on the amount of disaster money Burbank received after Northridge.

She also reported on the latest fire grant application and some of the specifics in that application – illustrating what kind of information needs to be incorporated in this plan and also showing what kind of information is available to the public.

Public Input

Questionnaire: The form was approved by the committee with the exception of putting the return address on the form and including the Spanish edition. The Questionnaire will be distributed per the suggestions in the last meeting minutes. Peter suggested that the City PIO be asked to put the survey on the website and that the fact

1

City of Burbank
Hazard Mitigation Planning Team Committee Meeting
July 29, 2004

that it's there will be advertised on Community Cable TV Access and Public Radio. Distribution will also be through the BEARS and the CDV and Chamber of Commerce Group. Roger suggested that a copy of this go to the City Manager before it is distributed. Kim and Roger will take this for action. It will also hopefully be approved prior to the National Night Out Community Event.

REVIEW OF DOCUMENTS RECEIVED

Data Listed on Agenda

The list was reviewed.

A sample of aerial photos was discussed showing how current public information is and how easily available they are.

Peter supplied a copy of the Business Continuity Plan which will be used extensively in the HM Plan.

The City Multi-Hazard Functional Plan and Disaster Plans are also with the consultant.

Jan discussed the USC HAZUS run. She reported that we are trying to get more accurate input data such as cost of reconstruction, and upgrade the run to a level 2 report.

NEW BUSINESS

Past Mitigation Strategies

Post-Northridge Earthquake compiled mitigation dollars for the City of Burbank:

1. Building demolition
2. Electrical distribution facility and substation retrofits

Current Mitigation Strategies

1. Current seismic retrofits (contract not yet awarded) – Penny will supply a staff report that summarizes the projects.
2. Wireless network in the event the landline system is damaged or destroyed
3. Ongoing biomass reduction and control
4. Shake roof prohibition on new construction
5. Storm drain and sewer system retrofit and repair
6. Wild Fire fuel reduction
7. Vector control of West Nile Virus

Future Mitigation Strategies

1. Second phase of building seismic retrofit project (cost/benefit analysis and project detail)
2. Security of data and data loss prevention
3. Battery backup on traffic signals and remote traffic control
4. Pipeline-related tanker truck traffic on the Interstate Highway. For Pacific Pipeline through the State PUC. The report was done 5-8 years ago.

2

City of Burbank
Hazard Mitigation Planning Team Committee Meeting
July 29, 2004

Jan suggested that any Hazard Mitigation Grant Applications that are turned down should be retained and re-submitted from time to time.

Other Information

Critical Facilities that are not located within the City

- SBC Telephone Services

- Hyperion Sewage Treatment (Some storm drains belong to the County. The City owns their sewer systems, treats sewerage and then transfers it to Hyperion. If Hyperion were to go down, the City could sustain its own water treatment for a short period of time and discharge through outfalls into the LA River.)

- Metro Water Facilities

- Edison Electricity (a new GE 5-city 2-plant system is being constructed currently which takes in all the cities and all private properties. The system will be capable of powering the entire city; however its intended purpose is to be operated by a 5-city cooperative. The system is powered by Natural Gas). Jan asked that if anyone on the committee has information on electrical failure during a disaster from SCE, to consider making it available to the Consultant for inclusion into the Plan.

(Roger reported that a Master Plan done about 8 years ago shows all the outside service and product providers and where they cross into the City.)

(Peter reported that there are regulations requiring inspection of utilities periodically. The information that would benefit this Plan would be inspection reports revealing old or high risk portions of the different utilities. Any vulnerable older infrastructure risks would be beneficial.)

(Penney suggested asking the Disaster Manager from Burbank Water & Power to a future meeting.)

(Roger reported that there are places listed in the Disaster Plan that would be considered vulnerable to Civil Unrest, Terrorism and other major disaster-magnitude law enforcement events. The Studios, Airport, Starlight Bowl, Parades, St. Joseph's Hospitals, LA Equestrian Center.)

(Penney reported that West Nile Virus has been detected all through the City of Burbank.

Meeting Adjourned 3:00 PM

3

City of Burbank Hazard Mitigation Planning Team Committee Meeting
August 12, 2004

Meeting Called to Order

Meeting called to order at 1:39pm

Members Present

Kim Withers	Disaster Services	X3491	kwithers@ci.burbank.ca.us
Rich Baenen		X3550	
Roger Baker		X5278	rbaker@ci.burbank.ca.us
Peter Sio	I.T. Manager	X5082	
Penny Forbes	AAI	X3920	pforbes@ci.burbank.ca.us
Mary Riley	Sr. Assistant Att.	X5702	
Greg Simay	Asst. General Mgr.	X3559	gsimay@ci.burbank.ca.us
Gwen Indermill	Recreation Services Mgr.	X5313	gindermill@ci.burbank.ca.us
Jan Rogala	Dimensions	707 374-6529	janrogala@aol.com
Kristel Arnott	Dimensions	626 286-8305	kristel@dimensionsui.com

Consideration of Minutes

Minutes were approved with one correction on page 3: Pennies should be changed to Penny's.

Old Business

The Committee reviewed and discussed the risk matrix results.

- Hazardous materials were missing from the matrix results and added in as a high risk.
- The Committee also discussed Radiological hazards and concluded that they would be listed under Hazardous Materials.
- Data/Telecommunications and Biological were also missing from the matrix, the committee agreed that they would rated as a moderate risk
- The Committee discussed Aviation Disaster with regards to Utilities
- Possible that an aviation disaster would take out a substation
- The Committee came to the conclusion that their abilities to influence and aviation disaster is limited

High Risk	Moderate Risk	Low Risk
Earthquake	Destructive Winds	Dam Failure
Transportation Accidents/Incidents	Aviation Disaster	Special Events
Transportation Disruption	Severe Weather (Inclusive)	Sinkholes
Wildland Urban Interface Fires	Explosions	Volcanic
WMD/Terrorism	Economic Disruption	
Electrical Power Substation		
Utility Loss(Inclusive)		
Utility Disruption(Inclusive)		
Water/Wastewater Disruption		
Hazard Materials		

The Committee requested that Dimensions keep them posted with a timeline.

Mitigation strategies

Mitigation Strategies should be finished by the next meeting, but will be discussed and revisited at every meeting. Any changes or additions that come up will go into the plan. The Committee discussed Water/Power input in the mitigation strategies regarding what they have done and how it will impact others.

The Committee discussed new Homeland Security laws and their impact on the Plan. Dimensions informed the Committee that confidential information can be summarized and referenced in the plan.

City of Burbank Hazard Mitigation Planning Team Committee Meeting
August 12, 2004

Questionnaires:
The Committee drafted a menu that went out the morning of August 12, 2004 and will go out that same day.
Council will make the announcement
End of the month deadline for the questionnaires to be finished

New Business
The Committee discussed the State review process and when the plan will be sufficient enough to bring to a closed session meeting with their council. Dimensions will get back to the committee with a date for the plan.

Documents

Adjourned
The meeting was adjourned at 4:00pm

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

August 26, 2004

Meeting Called to Order

Meeting was called to order at 1:32 pm.

Introductions

Members Present

Kim Withers	kwithers@ci.burbank.ca.us
Rich Baenen	rbaenen@ci.burbank.ca.us
Roger Baker	rbaker@ci.burbank.ca.us
Peter Sio	psio@ci.burbank.ca.us
Penny Forbes	pforbes@ci.burbank.ca.us
Jan Rogala	janrogala@aol.com
Theresa Hayes	Theresa@dimensionsui.com

Consideration of Minutes

The minutes were review and adopted with the following corrections

- Adjourned at 3:00pm.
- Add Flood to Moderate Risk
- Strike "and" last bullet sentence, page one last bullet
- Change first sentence in Questionnaire paragraph to: The Committee drafted a memo to the City Managers on August 12, 2004.

Old Business

Report on the Disaster Council Meeting

Rich gave a brief summary of the Disaster Council meeting to the Planning Team. A good cross section of City departments and businesses attend the meeting. The Public Input Questionnaire was handed out to the participants. Dimensions gave a DMA 2000 Plan presentation which generated interest and questions. Perceptions and prioritization of the Hazard Risk Analysis was insightful for future meetings. Aviation Disaster was discussed at length during the meeting. Bob Hope Airport is located in Burbank. The Planning Team agreed to raise Aviation Disaster from a moderate risk to the high.

Civil Unrest/Disorder as discussed by the Team. The City of Burbank has visiting governmental officials and their entourage. The potential for political protesters and civil unrest is a moderate risk. The Planning Team voted to add Civil Unrest/Civil Disorder as a moderate risk.

The hazard risks will be described in groups and subsets.

Public Input

The Public Input Questionnaire was reviewed and adopted by the Team. The questionnaire availability:

- Disaster Council

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

August 26, 2004

- Libraries
- Announced by the Mayor at the City Council meeting August 24, 2004
- Website ?

Kim gave Dimensions completed questionnaires.

Summary of changes to the Risk Analysis

- High Risk – Aviation Disaster
- Moderate Risk – Flood
- Moderate Risk – Civil Unrest/Civil Disorder

Mitigation Strategies

Mitigation strategies provided by the Team.

Investigate possible weapons stored at the National Armory facility.

The Team will form a Utility Sub-Committee. Roger will contact Greg Simay, Fred Lance, and Fred Fletcher. Rich, Roger and Theresa will be part of the committee.

Constraints/Capability Assessment

The Team discussed mitigation constraints for Aviation Disaster, Utility Loss, Transportation Loss, and Hazardous Materials.

Critical Facility List

Peter has additions to the Information Technology inventory list. He will send the Y2K report to Jan. Peter will develop a mitigation strategy for back up power for their IT system. The Uninterrupted Power Source (UPS) failed recently.

Critical facility/Target baseline has changed to higher criteria. Burbank's facilities which meet the new threshold are:

- Bob Hope Airport
- Warner Bros.
- Disney
- St. Joe's Hospital
- LA City Power Supply

Adjourned 2:30pm

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

September 23, 2004

Meeting Called to Order

Meeting was called to order at 1:35 pm.

Introductions

Members Present

Rich Baenen	rbaenen@ci.burbank.ca.us
Roger Baker	rbaker@ci.burbank.ca.us
Penny Forbes	pforbes@ci.burbank.ca.us
Gwen Indermill	gindermill@ci.burbank.ca.us
Greg Simay	gsimay@ci.burbank.ca.us
Bob Trowbridge	rtrowbridge@ci.burbank.ca.us
Roger Mason	rmason@ci.burbank.ca.us
Kristel Arnott	kristel@dimensionsui.com
Theresa Hayes	Theresa@dimensionsui.com

Consideration of Minutes

The minutes were review and adopted with the following correction;
Betsy Dolan's e-mail address will be changed from eddan@ci.burbank.ca.us to edolan@ci.burbank.ca.us.

Old Business

Mitigation Strategies

Dimensions received the following Mitigation Strategies from the Committee to be added to the Mitigation Strategies Matrix:

Program/Project	Review and test all UPS systems for City facilities (including critical facilities like EOC, sewage treatment, etc.) water pumping.
Cost	$20,000 mostly in house labor (additional mitigation costs may surface depending on results of testing.)
Timeline	Autumn 2004
Department	Public Works, BWP
Financing	General Funds
Goal Addressed	Allows critical city functions to continue for at least X hours following a major power outage.
Related Hazard	Earthquakes and any hazard resulting in widespread power outage.

Program/Project	Battery back –up for traffic signals at key intersections
Cost	$100,000 per year
Timeline	X intersections per year
Department	Public Works
Financing	General Funds
Goal Addressed	Minimize traffic hazards and disruption following a power outage to traffic signals.
Related Hazard	Earthquakes and any hazard resulting in widespread power outages.

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

September 23, 2004

Program/Project	Capital improvement projects for electric systems.
Cost	$8 million to $20 million per budget
Timeline	Refer to budget
Department	BWP
Financing	Fund 496
Goal Addressed	Making electric system less vulnerable to natural disasters and terrorism.
Related Hazard	Natural disaster, Terrorism

The City has applied for grants to implement fire breaks and reduce the risk of Wildland/Urban Interface fires.

A plan has already been completed to update equipment for the Police and Fire Departments with a new radio system.

Review of Strategies Matrix:
The Committee made corrections and will continue to adjust timelines, identify funding resources and prioritize strategies to the Hazard Risk Strategies Matrix.

Dimensions will send the Committee prioritization definitions and the Natural Mitigation Strategy Suggestion form from OES.

Questionnaire:

It was determined by the Committee that the questionnaires are complete, no more need to be done. Dimensions will compile the questionnaires and update the Committee with the results.

New Business

Airport Meeting:

The meeting between Burbank Airport and the City of Burbank was not held, but the strategic decision was made by the Airport not to do a DMA 2000 Plan. A representative from Burbank Airport will meet with a representative from the City of Burbank and Dimensions next week.

Utilities Meeting:

The Utilities Subcommittee met last week and discussed the City's Water/Wastewater system. The Water/Wastewater's Vulnerability Assessment is confidential and will only be referred to in the City's DMA 2000 Plan.

The Committee will supply Dimensions with the City's Budget and Capital Improvement Plan (CIP) on a disk.

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

September 23, 2004

Review Process:

- The Courtesy Review will be done by the State, and not FEMA.
- Discussed the Committee's options for how they would like to go through the review process.
- Date for City Council Adoption

Documents:

- Mitigation Strategy Project Forms
- Questionnaires

Adjourned

Adjourned 2:30pm

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

October 7, 2004

Meeting Called to Order

Meeting was called to order at 1:34 pm.

Introductions

Members Present

Rich Baenen	rbaenen@ci.burbank.ca.us
Kevin Woodruff	Kwoodruff@ci.burbank.ca.us
Penny Forbes	pforbes@ci.burbank.ca.us
Bob Trowbridge	rtrowbridge@ci.burbank.ca.us
Mike Flad	mflad@ci.burbank.ca.us
Gwen Indermill	gindermill@ci.burbank.ca.us
Roger Baker	rbaker@ci.burbank.ca.us
Jan Rogala	janrogala@aol.com
Theresa Hayes	Theresa@dimensionsui.com

Consideration of Minutes

The minutes were reviewed and adopted as is.

Old Business

Mitigation Strategies

The committee reviewed mitigation strategies from the Los Angeles County DMA 2000 Plan. New mitigation strategies were discussed and will be developed by the committee or on an individual basis for the committee to review and adopt.

Airport Status and Meeting

A representative from Dimensions and the HM Planning Team will schedule and meet with the Bob Hope Airport. If the City has any liability from the Airport not submitting a DMA 2000 Plan, it will be noted in Burbank's why the Airport choose not to develop and comply with the DMA 2000 Act. An option would be a release of liability from the Bob Hope Airport.

New Business

Review Draft of Burbank DMA 2000 Plan

A first draft of the Plan was presented to the Team for their review and comments.

Review Sample Plans

A copy of the Los Angeles County and City of Monrovia DMA 2000 Plan was provided for the Team to comment on style and formatting.

1

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

October 7, 2004

Capability Assessment Form

A Capability Assessment Form was given to the Team to complete.

State of California DMA 2000 Plan

The State of California DMA 2000 Plan was approved by FEMA on October 6, 2004.
There have been 60 DMA 2000 Plan submitted to OES. The City of Berkeley is the only other approved plan at this time.

Burbank Plan Process

Timeline

- City Manager – Approval to send Plan for courtesy review. Week of November 15, 2004
- City Council – The Council is aware the Plan is being developed. They can appoint an authority to make non policy related changes as necessary

- Plan to be submitted to OES for courtesy review in November Week of November 22, 2004
- Changes if needed after OES review in December 2004/January 2005
- City Council Final Adoption January 25, 2005

Mitigation strategies and other documents will be integrated into the Draft in December as they are developed and completed.

Land Use Element is currently being updated and will be referenced in the Review Draft. After the Land Use Element has been completed and adopted, it will be inserted in the Final Draft.

Copies of the Final Draft will be produced two weeks prior to the City Council January 25, 2005 meeting. Dimensions will deliver a Hardcopy and CD of the Plan by January 10, 2005.

Indian Tribes

There are no Indian Tribes within the City's boundary.

Next Meeting

October 21, 2004 at 1:30 pm.

Adjourned

Meeting adjourned at 2:34 pm.

2

City of Burbank
Hazard Mitigation Planning Team Committee
Meeting
October 21, 2004

The meeting was called to order at 1:30 P.M.

Present were:

Roger Mason	Police Department	818-238 3002
Penny Forbes	Public Works Depart.	818 238 3920
Greg Simay	BWP AGM Dist	818 238 3559
Peter Sio	I T Manager	818 238 5082
Rich Baenen	Burbank Fire Dept.	818 238 3350
Betsy Dolan	AAII City Managers Office	818 238 5823
Roger Baker	Community Development	818 238 5278
Bob Trobridge	Batt. Chief, Burbank Fire	810 238 3361
Janice Rogala	Dimensions Unlimited Inc.	707-374-6529

The minutes from the past meeting were approved at submitted.

Old Business:

On going work of developing Hazard Mitigation Strategies

Gwen Indermill the Recreation Services Manager submitted more strategies and the group reviewed the individual strategies and accepted them with the recommendation they go forward.

Penny Forbes from Public Works advised that she need more time and working strategies with Public Works to review and write potential Hazard Mitigation Strategies. There was some discussion on having a group meeting to brain storm strategies and it was decided the departments would work internally for now.

Discussion was held on the Lockheed Channel which was originally developed in the 1930's as a flood channel.

Discussion was also held on the Empire Center and how it was set on pads to be above the 100 year flood plain.

Burbank is almost completely developed so the challenges are to do redevelopment with mitigation appliedAirport: The airport representative was not available to meet and the City has not decided on a course of action for the airport's DMA 2000 compliance.

Strategies that would mitigate power failures were discussed and the use of additional GIS support.

A mitigation strategy was offered to develop risk and consequence layers on the GIS system. It would require the addition of a plotter and a printer.

A mitigation strategy was proposed for a portable GIS capability for emergency response be constructed. The City of Glendale currently has one they use in the field in emergencies.

The issue of a fiber optic back up between the Fire/Police headquarters and the EOC was discussed

A suggestion was made for a strategy to have a redundancy to the Quest Service.

Feasibility Study for a new Computer Aided Dispatch System for Police and Fire

The planning group agreed to develop these thought further and develop them into strategies for the next meeting on November 4, 2004.

The meeting adjourned at 2:45 P.M.

City of Burbank
Hazard Mitigation Planning Team
Meeting Meetings:
November 4, 2004

Introductions:

The Meeting was called to order at 1:30 P.M.

Present were:

Gwen Ladermill	Parks and Recreation	818-258 5313
Roger Baker	CDD Planning	818 238 5278
Penny Forbes	Public Works	818 238 3920
Rich Baenen	Fire Department	818 238 3350
Peter Sio	I.T. Manager	818 238 5082
Bob Trowbridge	Fire	818 238 3361
Roger Mason	Police	818 238 3002
Janice Rogala	Consultant	707-374 6529

The minutes from the previous meeting were approved as submitted.

The group recommended a mitigation strategy for a feasibility study to determine and identify the adequacy of redundant fiber optic and wireless connections between the various data storage servers within the city and identify any improvements for data storage or redundant linkages.

This study would also encompass;

- linking systems into the GIS data base
- updating and linking systems to the hazardous materials data base.
- Linking to the Permits Plus data storage server
- Feasibility of integrating a direct line to Quest

A feasibility survey was suggested to identify where in the private sector video cameras were located and the broadcast capabilities for those cameras

A feasibility study was discussed to have a redundant fiber network on top of Public Works traffic diversion. There is a Loop System for traffic signals that can be used for other City Departments. It would provide network overlays.

Goal: To install and link the fiber optic so the EOC would be able to monitor and pan the cameras on stop signs. This would give the EOC on the spot coverage of ongoing incidents.

A feasibility study to set the EOC up with wireless connections to major city facilities along with a built in redundancy

A need was identified to conduct a "Data System Network Map" which would include both the current and proposed expanse of system. This could be a stand alone project

It was suggested the EOC put together a meeting of all of the stakeholders who need to use data in disasters to determine information sharing capabilities and future needs.

A discussion was held on the upcoming law enforcement CAD system which would be a redundant system for both police and fire. It would, however, be a very basic systems and would need to log and capture data to update the Verdugo Center. Concern was expressed on how

much data and ability would be lost if the Verdugo Center failed and the need to merge the data post disaster for FEMA claims.

An SOP will need to be developed for the Emergency Operations Plan on how the EOC and Fire and Police will continue operations.

A feasibility study was suggested to study the linkages to the Verdugo Center and potential backup systems.

Discussion was held for a feasibility study to set up both a mobile dispatch center for use in emergencies and a mobile GIS center which would incorporate a computer with GIS capability and a Plotter Printer in what was termed a Ruggedized configuration

The Park and Recreation Hazard Mitigation suggestions were reviewed and discussed as were the Public works strategies.

Dimensions was given a budget disc for updating department descriptions.

Meeting was adjourned at 3:30 P.M.

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

November 18, 2004

Meeting Called to Order

Meeting was called to order at 1:45 pm.

Introductions

Members Present

Rich Baenen	rbaenen@ci.burbank.ca.us
Peter Sio	psio@ci.burbank.ca.us
Penny Forbes	pforbes@ci.burbank.ca.us
Gwen Indermill	gindermill@ci.burbank.ca.us
Bob Trowbridge	rtrowbridge@ci.burbank.ca.us
Kristel Arnott	kristel@dimensionsui.com
Rich Rogala	Rich@dimensionsui.com

Consideration of Minutes

The minutes were reviewed and adopted with the following corrections;
In the third paragraph, "on top of" will be changed to "in addition to the current and diversion will be changed to division. In the fourth paragraph stop signs should be traffic signals at key intersections.

Old Business

Plan Maintenance:

A Steering Committee will meet yearly to update and maintain the Plan as a "Living Document, after it has been adopted. A corrections sheet will be added to the Plan to attach changes to the Plan as it is revised.

Plan Review:

Each section and any missing information from the Plan Draft were reviewed. No corrections by the Committee have been made as of yet. Peter Sio will create a shared folder for the Committee to view the Plan on their computers.

Section 1:
UBC and UFC Codes will be referenced in the Plan. These Codes also describe the California Fire Code and the building codes. A special reference will be made to the Los Angeles County Health Code. A reference to the Cities Multi-Hazard Functional Plan should also be included in the Plan.

Section 2:
Rich Baenen will e-mail Dimensions Bulleted Points from the Disaster Council Meeting to be included in the Plan as Public Outreach.

Section 3:
General Facilities section is currently blank. The Committee will provide the City owned assets electronically. Critical Facilities and Non-City owned are still being determined.

City of Burbank Hazard Mitigation Planning Team
Committee Meeting

November 18, 2004

Section 4:
More information for Transportation Accidents will be provided for the Plan, to tie into the City of Burbank. (i.e. History, Police and Fire Department preparation for Aviation Accidents, Pipelines) The August 5 2000"Jergens Incident" was discussed, and should be included in Transportation Accidents.

According to the August 26 Minutes, the Committee agreed to move Aviation Disaster to a High Risk Priority and Flood to a Moderate Risk Priority. Dimensions will make the necessary corrections.

New Business

GIS data will be used to prepare color maps of Burbank and included in the Plan.

More information about the Cities role and safety standards regarding wastewater and utilities will need to be described in the Plan. A description of the wastewater process should also be included.

A study done ten years ago describing the economic development of the City of Burbank is available to be used in the Plan

Adjourned

Adjourned 2:35pm

Section 3 – Demographics & Statistics

History

(Information from *A Thumbnail Sketch of Burbank*)

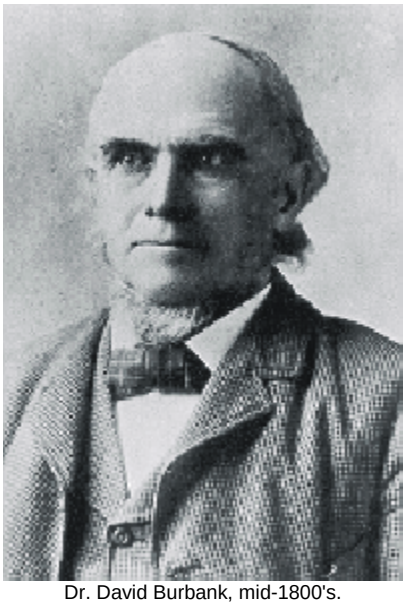
1798-1887

A large part of the area that we now know as Burbank was once a portion of the Rancho San Rafael, resulting from a land grant from the Spanish government to Jose Maria Verdugo in 1798.

The remaining southern portion of Burbank was contained in the 4600 acre Rancho La Providencia; another Mexican land grant. Historically, this area was the scene of a "military skirmish" which resulted in the unseating of the Spanish Governor of California, and his replacement by the Mexican leader Pio Pico.

Over time, the Verdugos were forced to sell a portion of their land, and in 1857, John R. Scott became the first American to hold land in the San Rafael portion of Burbank. Rancho La Providencia eventually was sold to Alexander Bell and David W. Alexander, members of the first City Council of Los Angeles.

In 1867, Dr. David Burbank, a dentist from Los Angeles, purchased over 4000 acres of the former Verdugo holding from Jonathon R. Scott, and another 4600 acres of the Rancho La Providencia and for several years operated a very successful sheep ranch. Later, in 1887, Dr. Burbank sold his land holdings to the Providencia Land, Water, and Development Company for a reported profit of $240,000. "Burbank" was officially named after the pioneer ranching dentist on May 1, 1887.



Dr. David Burbank, mid-1800's.

1900-1927

As time passed, the countryside surrounding the townsite was developed with vineyards, and crops of peaches, grapes, alfalfa, melons, and vegetables. During the early 1900's, the community's "chief claim to fame" was James J. Jeffries the undefeated heavyweight champion of the world. Jeffries resided on a 107-acre ranch, and the ranch house was located where what is now Buena Vista and Victory Boulevard.

James J. Jeffries, shown after winning the heavyweight boxing championship in 1899.

Over the next several years the City continued to progress, approving several bonds which provided water and electric facilities, and in 1916 an additional 9.4 square miles were annexed into the City. A period of industrial growth, and real estate development followed, and the population grew from 2,913 in 1920 to 16,622 by 1930.

In 1926 a fifteen member Board of Freeholders was elected to draw up a City Charter. The Charter was later approved by the State Legislature, and became effective on January 13, 1927.

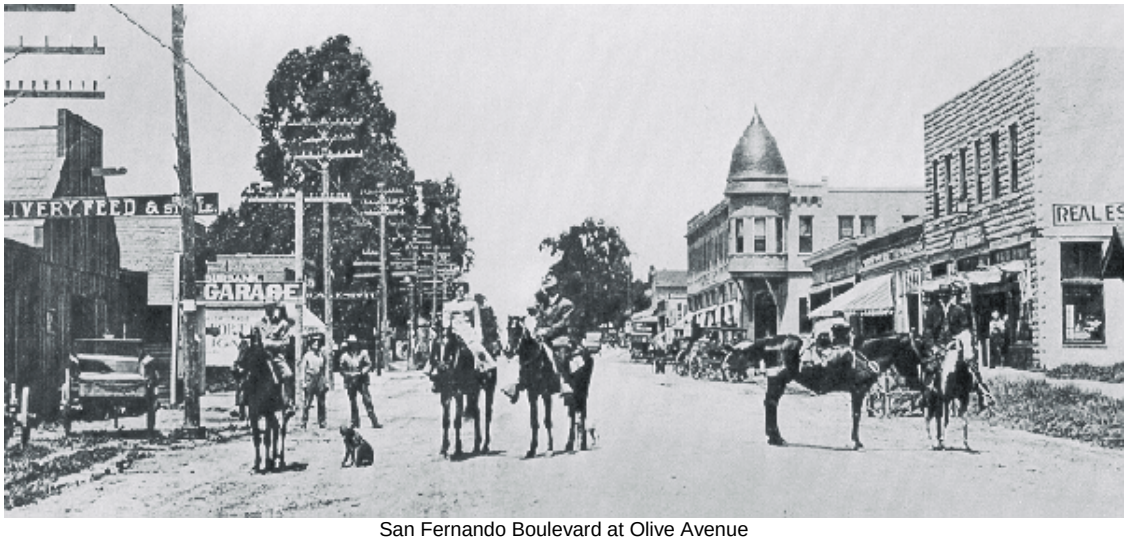
San Fernando Boulevard and Olive Avenue in 1927,
when the intersection was becoming the center of activity in Burbank.

1928-1950

The stock market crash and depression halted growth to the middle of the 1930's. World War II had a tremendous impact on Burbank's economy. Lockheed employed over 94,000 people who produced over 19,000 planes for the nations at war effort.

Three inches of snow blanketed Burbank on January 10, 1949.
Shown here is the old City Hall, built in 1916
and located across Olive Avenue from the current City Hall.

Another important feature in the development of Burbank, was the motion picture industry. By 1950, one-fifth of all feature films made in the United States came out Burbank. Today, Burbank is the home to the major studios in both the film and television industry, such as Warner Brothers, Disney, and NBC. As a result, related industries such as film editing, music recording, etc. make up a large portion of Burbank's industry. Based on the location of the industry, Burbank has been home to a number of Hollywood's biggest stars, from Doris Day and Bob Hope to Ron Howard.



San Fernando Boulevard at Olive Avenue
looking north, circa 1911.

Investing In The Future

Dr. David Burbank was active in Los Angeles real estate when he purchased portions of both ranchos in 1867. He combined them into a large ranch where he raised sheep, built a ranch house (on what was later Warner Bros. backlot) and occasionally sold off small plots of land.

Realizing that bringing in the railroad would increase the value of his ranch, Dr. Burbank sold the Southern Pacific Railroad a stretch of right-of-way for one dollar. The first train passed through Burbank on April 5, 1874.

During the rate war between the Santa Fe and Southern Pacific railroads, low fares brought people streaming into California and Dr. Burbank once more seized the opportunity. In 1886, he sold his property to a group of land speculators for $250,000 and the Providencia Land, Water and Development Company was formed.

The speculators laid out a business district, started construction on a "brick block building" which still stands on the corner of San Fernando Blvd. and Olive Avenue, and subdivided the property into small farms and residential lots. They opened the tract for sale on May 1, 1887, and the town of Burbank was born.

The population of the town was 500 when the voters approved incorporation in 1911. That same year, civic boosters began a campaign to have the Pacific Electric Streetcar line extended from Glendale into Burbank. The citizens of Burbank had to put up a $48,000 subsidy to get the reluctant P.E. officials to agree. The first Red Car rolled into Burbank on September 6, 1911.

Leading the opposition to the public fundraising was J.W. Fawkes, who had patented the first monorail car in the United States. He built a prototype on his Burbank ranch, running a line between Lake and Flower Streets. Fawkes called his invention the "Aerial Swallow." City officials, however, called it "Fawkes' Folly" and the proposed monorail system never materialized.

Burbank Continues to Grow

The following years brought marked progress in Burbank's development as a city. In 1917, civic leaders Ralph O. Church and Maurice Spazier convinced Walt Moreland to relocate his truck company to Burbank by offering him a free site to build.

The $25,000 cost was raised to buy the Luttge farm at San Fernando Blvd. and Alameda Avenue and the Moreland Truck Company became Burbank's first major industry. For years afterward, the Moreland trucks traveled the highways of the world bearing the label "Made in Burbank."

The 1920's saw a period of growth and real estate development with the population increasing from 2,913 in 1920 to 16,622 in 1930.

Earl L. White knew the value of a roadway connecting Burbank to the Cahuenga Pass. When he couldn't get help from the City, he cleared the underbrush through Dark Canyon and graded the street. This link is now Barham Blvd. and Hollywood Way.

White developed the Magnolia Park area and by 1929, more than 3,500 homes had been built. The area had a shopping center at the corner of Hollywood Way and Magnolia Blvd., a bank, Burbank's first radio station, KELW, and Magnolia Park's own newspaper, *The Tribune*.

Movies and Airplanes Move to Burbank

Burbank's continued growth was tied in to aviation and entertainment. Both industries came to Burbank because of its location and the available space.

Aviation in the mid-1920's was still in its infancy when the Lockheed Aircraft Company purchased a piece of Burbank farmland, near a place called "Turkey's Crossing," and built a plant for the production of its planes.

By the time the United States entered World War II, Lockheed had some 94,000 employees producing 19,000 planes. Burbank's prominence in the aviation field was evident during the War when Lockheed's Burbank-built planes helped win the Battle of Britain. The wartime effort of the aviation industry had pushed Burbank's population to 53,899 in 1943.

The motion picture business also moved to Burbank in the 1920's. First National Pictures bought up a 78-acre site on Olive Avenue near Dark Canyon. The company was soon taken over by another young company founded by four brothers by the name of Warner. On October 23, 1927, motion picture history was made when Warner Bros. released the first all-talking movie, *The Jazz Singer*, starring Al Jolson.

Other companies soon followed. Columbia Pictures purchased property in Burbank as a ranch facility, using it primarily for outdoor shooting. Walt Disney's company, which had outgrown its Hollywood quarters, bought 51 acres in Burbank. Disney's million-dollar studio was completed in 1939 on Buena Vista Street.

The Changing Face of the City

A new City Hall was built by City employees and opened in 1943. Still standing as a local landmark, the marble building has been named to the National Register of Historic Buildings.

Burbank's boom didn't end with the war. A postwar real estate boom left few undeveloped areas in the community. A ten-year capital improvement program produced many new municipal facilities, most of which were completed when the City celebrated its 50th anniversary in 1961.

During the 1960s and 1970s, more and more of the Hollywood entertainment industry were relocating to Burbank. The National Broadcasting Company moved its network television headquarters to its new location at Olive and Alameda Avenues. By 1962, NBC's multi-million dollar, state-of-the-art complex was completed.

On June 28, 1978, the airport was purchased from Lockheed through a tri-city authority. The newly named Burbank-Glendale-Pasadena Airport is the largest privately owned municipal airport in the United States.

Burbank continues to look to the future with the same "can-do" attitude of the early City pioneers. With the energy crisis of the 70s and the drought conditions of the 80s and 90s, Burbank quickly responded with conservation programs to deal with the environmental issues. The City has a nationally acclaimed recycling program and uses reclaimed water for landscape irrigation.

The 80's

In these last years of the 20th century, Burbank continues to see changes. In 1989, the Golden Mall was reopened and traffic again flowed down San Fernando Boulevard after 20 years as an outdoor pedestrian mall. After years of effort, the City finally obtained a major retail shopping center on a 41-acre site bounded by the Golden State Freeway, Burbank Blvd., Third St., and Magnolia Blvd. The downtown area has been revitalized with a wide variety of restaurants and multi-screen movie theatres.

The City Council began cablecasting their meetings on public television in 1987. The use of public access television has expanded citizen participation with government by bringing televised Board meetings and special programming into the home via cable.

The 90's

When Lockheed announced in 1990 that it would be closing its Burbank operations, the City began efforts to see that the 325 acres were recycled into new development projects.

In October 1992, two forward-thinking new facilities were opened. The Burbank Recycle Center moved to new 2-1/2 acre facility that can handle 5,000 tons of recyclables per month. The Regional Intermodal Transportation Center (RITC) opened at 201 N. Front St. Throughout the 90's it has been expanded and improved. In January 1998, the Police and Fire Departments moved in their new state-of-the-art Burbank Police-Fire Headquarters facility at 200 N. Third Street.

Today Burbank is a prominent media and entertainment-oriented city which prides itself on a high quality of life, combining 21st century technology with small-town feel. It is, indeed, a city of "people, pride, and progress."

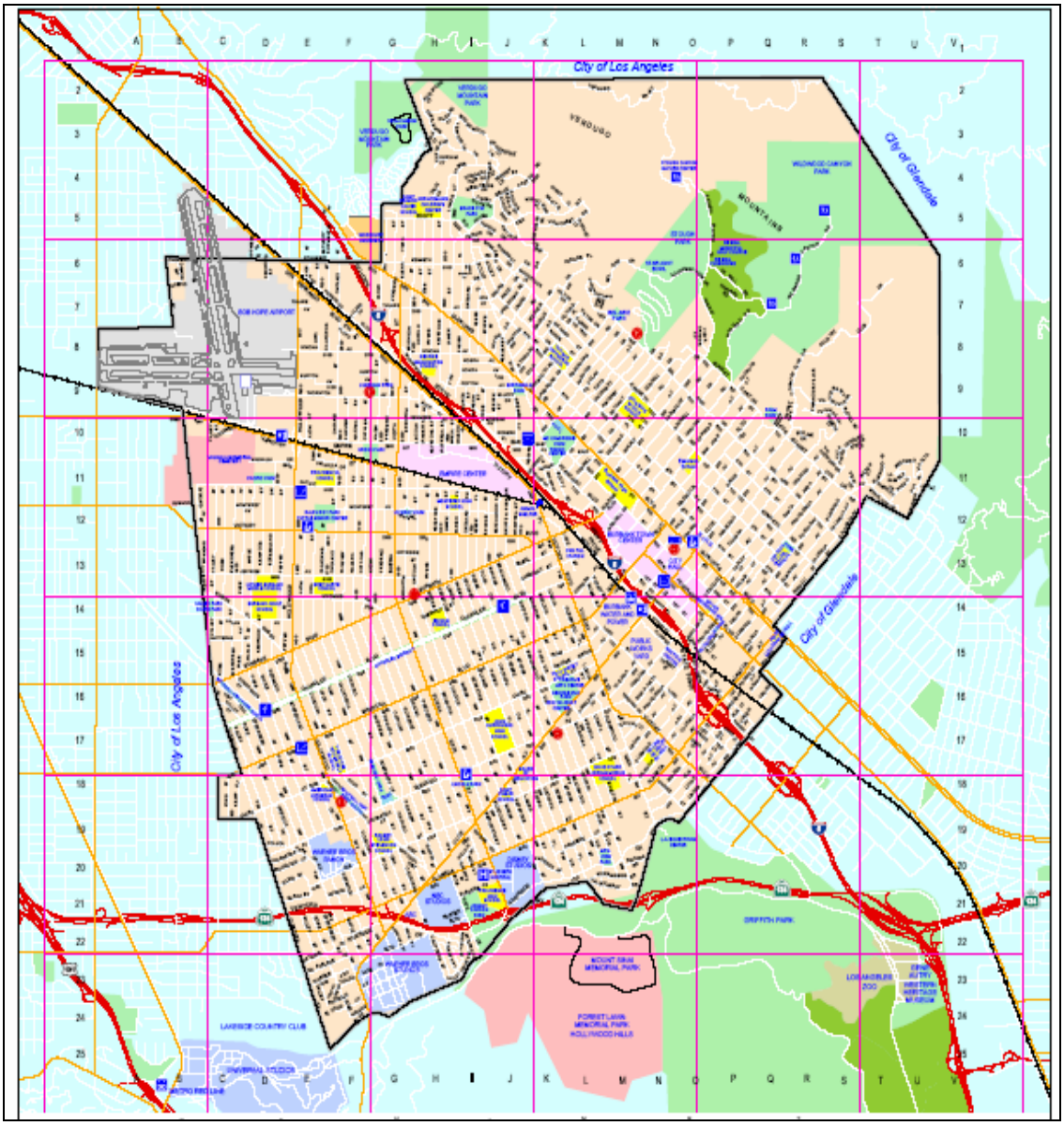
The New Millennium

Burbank continues to be recognized for its high quality of life and its ability to attract business and new residents. In 2001, the Empire Center was completed and opened for business on the former 103 acre Lockheed Plant B-1 site.

General Data

Area

Burbank is located in the eastern part of the San Fernando Valley, in Los Angeles County, 12 miles from the downtown area of the City of Los Angeles.



Population

Total population	**100,316**	**100.0**
SEX AND AGE		
Male	48,635	48.5
Female	51,681	51.5
Under 5 years	5,759	5.7
5 to 9 years	6,580	6.6
10 to 14 years	6,435	6.4
15 to 19 years	5,659	5.6
20 to 24 years	5,636	5.6
25 to 34 years	17,364	17.3
35 to 44 years	18,140	18.1
45 to 54 years	13,350	13.3
55 to 59 years	4,820	4.8
60 to 64 years	3,714	3.7
65 to 74 years	6,007	6.0
75 to 84 years	4,994	5.0
85 years and over	1,858	1.9
Median age (years)	36.4	(X)
18 years and over	77,979	77.7
Male	37,081	37.0
Female	40,898	40.8
21 years and over	74,836	74.6
62 years and over	14,994	14.9
65 years and over	12,859	12.8
Male	5,059	5.0
Female	7,800	7.8

Ethnicity

RACE		
One race	94,255	94.0
White	72,409	72.2
Black or African American	2,066	2.1
American Indian and Alaska Native	549	0.5
Asian	9,181	9.2
Asian Indian	678	0.7
Chinese	870	0.9
Filipino	3,341	3.3
Japanese	758	0.8
Korean	2,194	2.2
Vietnamese	648	0.6
Other Asian [1]	692	0.7
Native Hawaiian and Other Pacific Islander	142	0.1
Native Hawaiian	67	0.1
Guamanian or Chamorro	17	0.0
Samoan	25	0.0
Other Pacific Islander	33	0.0
Some other race	9,908	9.9

Two or more races	6,061	6.0
Race alone or in combination with one or more other races		
White	77,906	77.7
Black or African American	2,574	2.6
American Indian and Alaska Native	1,215	1.2
Asian	10,510	10.5
Native Hawaiian and Other Pacific Islander	344	0.3
Some other race	14,057	14.0
HISPANIC OR LATINO AND RACE		
Total population	**100,316**	**100.0**
Hispanic or Latino (of any race)	24,953	24.9
Mexican	14,216	14.2
Puerto Rican	506	0.5
Cuban	1,082	1.1
Other Hispanic or Latino	9,149	9.1
Not Hispanic or Latino	75,363	75.1
White alone	59,590	59.4

Education

SCHOOL ENROLLMENT		
Population 3 years and over enrolled in school	**26,245**	**100.0**
Nursery school, preschool	1,455	5.5
Kindergarten	1,319	5.0
Elementary school (grades 1-8)	10,743	40.9
High school (grades 9-12)	5,527	21.1
College or graduate school	7,201	27.4
EDUCATIONAL ATTAINMENT		
Population 25 years and over	**70,523**	**100.0**
Less than 9th grade	5,318	7.5
9th to 12th grade, no diploma	6,602	9.4
High school graduate (includes equivalency)	15,033	21.3
Some college, no degree	17,516	24.8
Associate degree	5,610	8.0
Bachelor's degree	14,543	20.6
Graduate or professional degree	5,901	8.4
Percent high school graduate or higher	83.1	(X)
Percent bachelor's degree or higher	29.0	(X)

Employment

EMPLOYMENT STATUS		
Population 16 years and over	**80,339**	**100.0**
In labor force	52,744	65.7
Civilian labor force	52,720	65.6
Employed	49,399	61.5
Unemployed	3,321	4.1
Percent of civilian labor force	6.3	(X)
Armed Forces	24	0.0
Not in labor force	27,595	34.3
Females 16 years and over	**42,094**	**100.0**
In labor force	24,694	58.7
Civilian labor force	24,675	58.6
Employed	23,271	55.3
Own children under 6 years	**6,464**	**100.0**
All parents in family in labor force	3,882	60.1
COMMUTING TO WORK		
Workers 16 years and over	**48,430**	**100.0**
Car, truck, or van -- drove alone	37,554	77.5
Car, truck, or van -- carpooled	5,708	11.8
Public transportation (including taxicab)	1,240	2.6
Walked	1,330	2.7
Other means	683	1.4
Worked at home	1,915	4.0
Mean travel time to work (minutes)	25.1	(X)
Employed civilian population 16 years and over	**49,399**	**100.0**
OCCUPATION		
Management, professional, and related occupations	20,302	41.1
Service occupations	5,768	11.7
Sales and office occupations	15,163	30.7
Farming, fishing, and forestry occupations	56	0.1
Construction, extraction, and maintenance occupations	3,252	6.6
Production, transportation, and material moving occupations	4,858	9.8
INDUSTRY		
Agriculture, forestry, fishing and hunting, and mining	100	0.2
Construction	2,126	4.3
Manufacturing	4,959	10.0
Wholesale trade	1,547	3.1
Retail trade	5,120	10.4
Transportation and warehousing, and utilities	1,894	3.8
Information	7,079	14.3
Finance, insurance, real estate, and rental and leasing	4,238	8.6
Professional, scientific, management, administrative, and waste management services	5,663	11.5
Educational, health and social services	7,844	15.9
Arts, entertainment, recreation, accommodation and food services	4,578	9.3
Other services (except public administration)	2,568	5.2
Public administration	1,683	3.4
CLASS OF WORKER		
Private wage and salary workers	38,667	78.3
Government workers	5,819	11.8
Self-employed workers in own not incorporated business	4,761	9.6
Unpaid family workers	152	0.3

Housing

Total housing units	**42,847**	**100.0**
UNITS IN STRUCTURE		
1-unit, detached	19,895	46.4
1-unit, attached	1,744	4.1
2 units	923	2.2
3 or 4 units	3,814	8.9
5 to 9 units	4,515	10.5
10 to 19 units	4,275	10.0
20 or more units	7,569	17.7
Mobile home	101	0.2
Boat, RV, van, etc.	11	0.0
YEAR STRUCTURE BUILT		
1999 to March 2000	243	0.6
1995 to 1998	651	1.5
1990 to 1994	2,554	6.0
1980 to 1989	5,379	12.6
1970 to 1979	4,192	9.8
1960 to 1969	4,773	11.1
1940 to 1959	19,343	45.1
1939 or earlier	5,712	13.3
Specified owner-occupied units	**16,088**	**100.0**
VALUE		
Less than $50,000	154	1.0
$50,000 to $99,999	217	1.3
$100,000 to $149,999	849	5.3
$150,000 to $199,999	2,017	12.5
$200,000 to $299,999	7,766	48.3
$300,000 to $499,999	4,306	26.8
$500,000 to $999,999	728	4.5
$1,000,000 or more	51	0.3
Median (dollars)	256,400	(X)
MORTGAGE STATUS AND SELECTED MONTHLY OWNER COSTS		
With a mortgage	11,955	74.3
Less than $300	13	0.1
$300 to $499	289	1.8
$500 to $699	519	3.2
$700 to $999	1,021	6.3
$1,000 to $1,499	2,777	17.3
$1,500 to $1,999	3,939	24.5
$2,000 or more	3,397	21.1
Median (dollars)	1,663	(X)
Not mortgaged	4,133	25.7
Median (dollars)	298	(X)
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15 percent	4,836	30.1
15 to 19 percent	2,153	13.4
20 to 24 percent	2,038	12.7
25 to 29 percent	1,915	11.9
30 to 34 percent	1,156	7.2
35 percent or more	3,851	23.9
Not computed	139	0.9

Specified renter-occupied units	**23,479**	**100.0**
GROSS RENT		
Less than $200	323	1.4
$200 to $299	328	1.4
$300 to $499	1,176	5.0
$500 to $749	8,790	37.4
$750 to $999	7,265	30.9
$1,000 to $1,499	4,329	18.4
$1,500 or more	857	3.7
No cash rent	411	1.8
Median (dollars)	778	(X)
GROSS RENT AS A PERCENTAGE OF HOUSEHOLD INCOME IN 1999		
Less than 15 percent	3,820	16.3
15 to 19 percent	3,822	16.3
20 to 24 percent	3,125	13.3
25 to 29 percent	2,423	10.3
30 to 34 percent	1,774	7.6
35 percent or more	7,579	32.3
Not computed	936	4.0

Income

INCOME IN 1999		
Households	**41,656**	**100.0**
Less than $10,000	3,584	8.6
$10,000 to $14,999	2,209	5.3
$15,000 to $24,999	4,543	10.9
$25,000 to $34,999	4,624	11.1
$35,000 to $49,999	6,773	16.3
$50,000 to $74,999	8,379	20.1
$75,000 to $99,999	5,270	12.7
$100,000 to $149,999	3,920	9.4
$150,000 to $199,999	1,249	3.0
$200,000 or more	1,105	2.7
Median household income (dollars)	47,467	(X)
With earnings	34,340	82.4
Mean earnings (dollars)	61,825	(X)
With Social Security income	8,648	20.8
Mean Social Security income (dollars)	11,568	(X)
With Supplemental Security Income	1,954	4.7
Mean Supplemental Security Income (dollars)	7,171	(X)
With public assistance income	1,586	3.8
Mean public assistance income (dollars)	4,344	(X)
With retirement income	5,493	13.2
Mean retirement income (dollars)	17,702	(X)
Families	**24,556**	**100.0**
Less than $10,000	1,193	4.9
$10,000 to $14,999	950	3.9
$15,000 to $24,999	2,162	8.8
$25,000 to $34,999	2,548	10.4
$35,000 to $49,999	3,800	15.5
$50,000 to $74,999	5,273	21.5
$75,000 to $99,999	3,823	15.6
$100,000 to $149,999	2,977	12.1
$150,000 to $199,999	1,043	4.2
$200,000 or more	787	3.2
Median family income (dollars)	56,767	(X)

Per capita income (dollars)	25,713	(X)
Median earnings (dollars):		
Male full-time, year-round workers	41,792	(X)
Female full-time, year-round workers	35,273	(X)
POVERTY STATUS IN 1999 (below poverty level)		
Families	**1,998**	**(X)**
Percent below poverty level	(X)	8.1
With related children under 18 years	1,567	(X)
Percent below poverty level	(X)	12.0
With related children under 5 years	499	(X)
Percent below poverty level	(X)	10.5
Families with female householder, no husband present	**647**	**(X)**
Percent below poverty level	(X)	14.3
With related children under 18 years	551	(X)
Percent below poverty level	(X)	19.3
With related children under 5 years	145	(X)
Percent below poverty level	(X)	19.5
Individuals	**10,484**	**(X)**
Percent below poverty level	(X)	10.5
18 years and over	7,493	(X)
Percent below poverty level	(X)	9.7
65 years and over	1,121	(X)
Percent below poverty level	(X)	9.0
Related children under 18 years	2,895	(X)
Percent below poverty level	(X)	13.3
Related children 5 to 17 years	2,326	(X)
Percent below poverty level	(X)	14.1
Unrelated individuals 15 years and over	3,499	(X)
Percent below poverty level	(X)	15.3

Structure of Government

Burbank City Council

Burbank is a charter city with a city council - city manager form of government. The City Council serves as the elected legislative and policy-making body of the City of Burbank, enacting all laws and directing any actions necessary to provide for the general welfare of the community through appropriate program, services and activities.

The City Council meets every Tuesday of each month starting at 5:00 P.M. for Closed Session and continuing at 6:30 P.M., in the Council Chambers, Burbank City Hall, 275 East Olive Avenue, Burbank, California.

The Goals of the City Council

- To insure that the city retains a sense of community and quality of life characterized by permanent residency in neat, well maintained and attractive single and multi-family neighborhoods suitable for all ages and socio-economic groups.

- To provide and further enhance a strong economic base by encouraging quality and clean retail commercial and industrial development that is compatible within a community of homes.

- To provide cost effective, quality safety services and facilities that result in the provision of a safe environment, so that citizens are secure in pursuing their professional and personal activities.

- To provide and enhance the high level of leisure, information and other human services available to Burbank citizens.

- To enhance the role of the City as a leader in the effort to protect the environment and preserve our natural resources while continuing to provide and enhance the essential public works and infrastructure of the City.

- To provide municipal government leadership which is open and responsive to its residential and corporate constituents and is characterized by stability, confidence in the future and cooperative interaction among civic leaders, residents, business people and City staff, while recognizing and respecting legitimate differences of opinions on critical issues facing the City.

- To operate the City government in a fiscally and managerially responsible and prudent manner.

Elected Officials

Marsha Ramos
Mayor
(May 3, 2004 - April 30, 2005)
Term Began: May 2001
Term Expires: April 2005

275 East Olive Avenue
P.O. Box 6459
Burbank, CA 91510-6459

Office Telephone: (818) 238-5751
Voice Mail: (818) 238-5750
Fax: (818) 238-5757

Jef Vander Borght
Vice Mayor
(May 3, 2004 - April 30, 2005)
Term Began: March 26, 2002
Term Expires: April 2007

275 East Olive Avenue
P.O. Box 6459
Burbank, CA 91510-6459

Office Telephone: (818) 238-5751
Voice Mail: (818) 238-5750
Fax: (818) 238-5757

Todd Campbell
Council Member
(May 1, 2004 - April 30, 2005)
Term Began: May 2003
Term Expires: April, 2007

275 East Olive Avenue
P.O. Box 6459
Burbank, CA 91510-6459

Office Telephone: (818) 238-5751
Voice Mail: (818) 238-5750
Fax: (818) 238-5757

Dave Golonski
Council Member
(May 1, 2004 - April 30, 2005)
Term Began: May 2001
Term Expires: April 2005

275 East Olive Avenue
P.O. Box 6459
Burbank, CA 91510-6459

Office Telephone: (818) 238-5751
Voice Mail: (818) 238-5750
Fax: (818) 238-5757

Stacey Murphy
Council Member
(May 1, 2004 - April 30, 2005)
Term Began: May 2001
Term Expires: April 2005

275 East Olive Avenue
P.O. Box 6459
Burbank, CA 91510-6459

Office Telephone: (818) 238-5751
Voice Mail: (818) 238-5750
Fax: (818) 238-5757

Donna Anderson
City Treasurer
(2001 - Present)

Office of the City Treasurer
275 East Olive Avenue
P.O. Box 7145
Burbank, CA 91510-7145

Office Telephone: (818) 238-5880
Fax: (818) 238-5885

Margarita Campos
City Clerk
(2001 - Present)

Office of the City Clerk
275 East Olive Avenue
P.O. Box 6459
Burbank, CA 91510-6459

Office Telephone: (818) 238-5851
Fax: (818) 238-5853

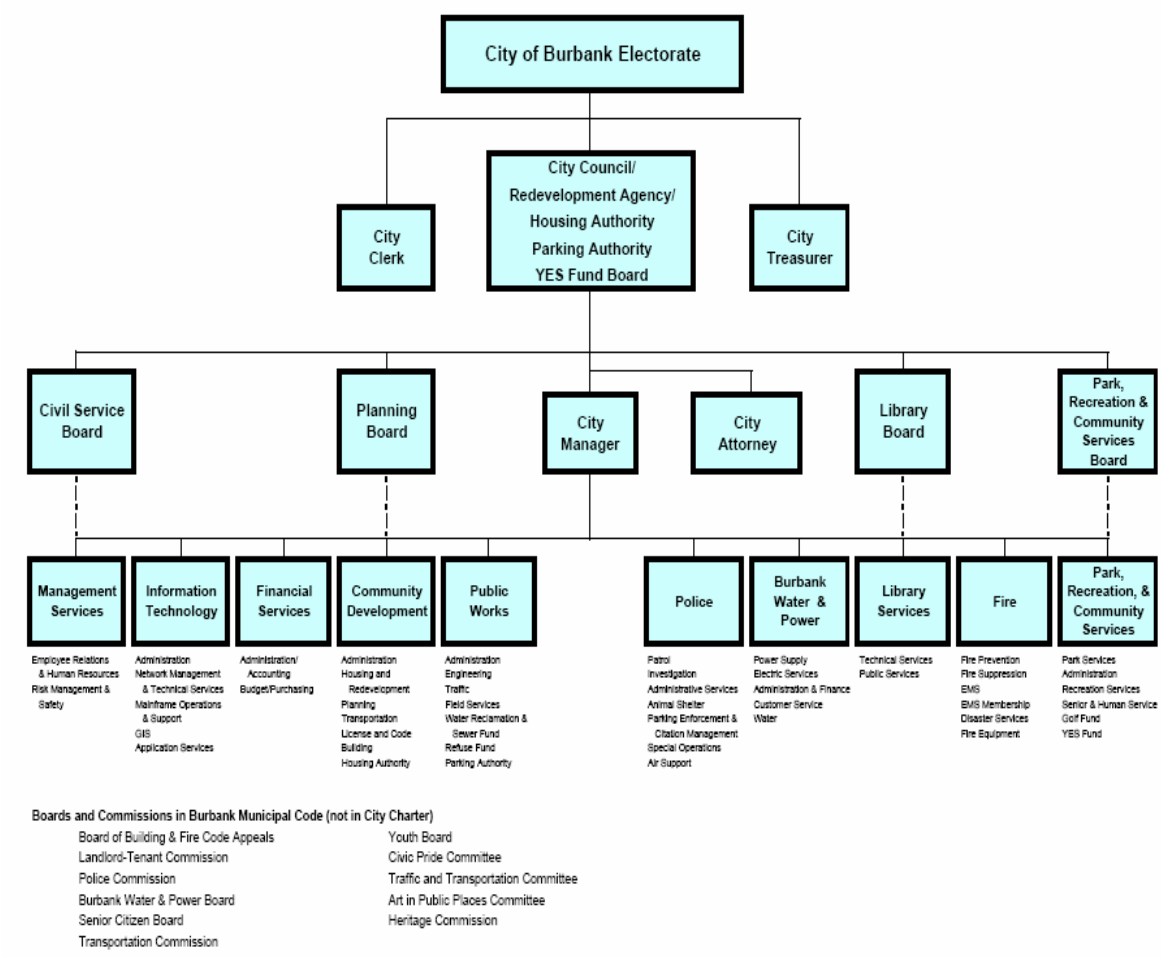
The City Council serves as the elected legislative and policy-making body of the City of Burbank, enacting all laws and directing any actions necessary to provide for the general welfare of the community through the appropriate programs, services, and activities. The City Council reviews and adopts the operating budget, holds public hearings to solicit advice, and hears suggestions and complaints from the public. The City Council authorizes contracts, purchases, and sales of city property, approves agreements with other governmental agencies, and appoints City commissions, boards and committees. In addition the City Council serves as the Burbank Redevelopment Agency, Burbank Parking Authority, Burbank Housing Authority, Youth Endowment Services Fund Board and Public Finance Authority.

The City Council is made up of the Mayor, the Vice Mayor and three Council positions.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	2.500	2.500	2.500	
SALARIES & BENEFITS	$ 258,393	$ 285,471	$ 296,085	$ 10,614
MATERIALS, SUPPLIES, SERVICES	170,447	158,028	153,758	(4,270)
TOTAL	$ 428,840	$ 443,499	$ 449,843	$ 6,344

City Administration



Departments & Responsibilities

City Attorney's Office

Departmental Services - Drafts and prepares all necessary legal documents such as contracts, deeds, ordinances and resolutions, or proceedings requested by the City Council or other officials.

Litigation - works with other City departments and divisions on legal matters to defend the City from legal action(s) brought against it, initiates lawsuits, code enforcement compliance, collection of monies owed to the City, eminent domain proceedings.

Prosecution - Prosecutes misdemeanor offenses occurring in the City arising out of violations of State or City law. Drafts and files criminal complaints in Superior Court; appears on behalf of the people of the State of California at arraignments; Pre-trials; Court Trial and Jury Trials. Represents the People of the State in Motions, writs and appeals, and works closely with the Police Department and other agencies to keep the City of Burbank safe and secure.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	20.000	19.500	19.500	
SALARIES & BENEFITS	$ 2,124,737	$ 2,179,668	$ 2,231,898	$ 52,230
MATERIALS, SUPPLIES, SERVICES	202,187	179,550	178,551	(999)
TOTAL	$ 2,326,924	$ 2,359,218	$ 2,410,449	$ 51,231

City Clerk

The city Clerk is an elected official who serves as the Clerk to the City Council, the Redevelopment Agency, the Parking Authority, the Youth Endowment Services Fund Board, the Housing Authority and the Public Finance Authority. The City Clerk's Office also conducts municipal elections, and consists of four divisions.

1. City Clerk Services
2. Elections
3. Legal Advertising
4. Records Management

The City Clerk is charged with maintaining all official records; keeping complete and accurate records of all City Council, Redevelopment Agency and other related proceedings; maintaining the Burbank City Charter and Municipal Code; conducting all municipal elections as scheduled, as well as any special election which may be called; filing campaign statements an statements of economic interest, as required, publishing all ordinances adopted by the City Council and other legal notices; administering the Records Management Program; and maintaining a comprehensive annual historical collection.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	7.500	7.000	7.000	
SALARIES & BENEFITS	$ 584,110	$ 476,965	$ 498,895	$ 21,930
MATERIALS, SUPPLIES, SERVICES	289,100	209,986	239,560	29,574
TOTAL	$ 873,210	$ 686,951	$ 738,455	$ 51,504

City Managers Office

Appointed by the City Council to serve as the City's chief administrative officer, the City Manager is responsible for setting goals and providing administrative direction for all City departments in full accordance with the policies established by the City Council. The overall department goal is to carry out the policies established by the City Council in an effort to maintain and improve the quality of life in Burbank. The Community Assistance Coordinator is available to help residents navigate the City Hall bureaucracy and resolve specific issues related to municipal services. The Public Information Office is also managed out of the City Manager's office. This Office provides the City with a

comprehensive communication program including dissemination of information about City services and activities using both print and video formats.

The Public Information Office operates Burbank TV6, Burbank's government access channel on Charter Communications cable channel 6. It is seen on channel 16 in the neighboring city of Glendale. Burbank TV6 airs informational shows about the City, its services, its activities, its people.

In the times between the listed programming, BurbankTV6 carries the Bulletin Board with information on City events, activities, services, great digital music and more.

The City Manager also services as the Executive Director of Burbank Redevelopment Agency, Housing Authority, Parking Authority and Youth Endowment Services Fund. (YES Fund)

The City Manager's goals are:

- Oversee the implementation of the city Council's City wide goals and Objectives.
- Provide ongoing support to the City Council.
- Monitor and actively lobby legislation affecting the City of Burbank.
- Continue to meet regularly with employee associations and unions to maintain positive management-labor relations.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	13.875	14.500	14.500	
SALARIES & BENEFITS	$ 1,300,437	$ 1,303,990	$ 1,355,990	$ 52,000
MATERIALS, SUPPLIES, SERVICES	328,896	250,032	218,574	(31,458)
CAPITAL OUTLAY	21,669	25,000	25,000	
TOTAL	$ 1,651,002	$ 1,579,022	$ 1,599,564	$ 20,542

City Treasurers Office

The City Treasurer is chosen by the vote of the people at a municipal election for a four year term in the same manner as members of the Council.

The City Treasurer's Office is responsible for receiving, disbursing, depositing and investing all public funds for the City, the Redevelopment Agency, the Youth Endowment Services (YES) Fund, the Parking Authority and the Housing Authority.

The primary mission of the City Treasurer's Office is the safekeeping of City funds. Safety, liquidity and yield are always considered (in that order) when investing idle funds.

Monthly reports including cash balances by fund and reconciled bank balances are provided to the City Manager, the City Clerk and the Financial Services Director.

The City Treasurer's Office also provides quarterly reports indicating the type and amount of investments and deposits, the institutions in which these deposits are made, market values, maturity dates and rates of interest for all outstanding investments, as well as others that matured during the month, to the City Council, the Redevelopment Agency, the Youth Endowment Services (YES) Fund Board, the Parking Authority and the Housing Authority. Monthly reports are provided to the Vice-Mayor, City Manager, Financial Services Director, Burbank Water and Power General Manager and members of the Treasurer's Oversight Review Committee.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	5.000	5.000	5.000	
SALARIES & BENEFITS	$ 309,558	$ 329,127	$ 357,430	$ 28,303
MATERIALS, SUPPLIES, SERVICES	122,630	118,557	119,475	918
CAPITAL OUTLAY	7,976			
TOTAL	$ 440,164	$ 447,684	$ 476,905	$ 29,221

Community Development Department

Administration

Administrative Division activities including budget development, financial administration, personnel management, and interdivisional and interdepartmental project coordination.

Building Division

The Building Division's Plan Check, Inspection, and Counter staff members work to assure building safety in our built environment.

Plan Check engineers review engineering and architectural plans for residential, commercial, and industrial buildings. Our engineers also participate in building code development and adoption, and computer applications. Inspection responds to over 32,000 field inspection calls per year. During construction, inspectors also address any concerns regarding construction impacts to surrounding properties.

Counter staff processes all fee payments for CDD. Copies of permit records are available here.

Planning Division

The Planning Division is comprised of five sections: Current, Advanced, Special Studies, Transportation, and License and Code Services.

Current Planning is responsible for the processing of development applications, as well as zone map, text, and general plan amendments, planned developments, variances, conditional use permits, and subdivision applications.

Advanced Planning updates the General Plan, which includes seven elements, which are: Land Use, Noise, Seismic Safety, Circulation, Air Quality, Open Space, and Housing. This section also conducts environmental review and provides assistance to the public with demographic and subdivision requirements.

Special Studies is responsible for the preparation and processing of Specific Plans, General Plan and Zone Text Amendments, and also processing of large comprehensive projects and their associated Environmental Impact Reports (EIRs).

Transportation Planning implements transportation related capital improvement projects such as the Regional Intermodal Transportation Center (RITC). The RITC is a regional transportation link between Metrolink trains, local shuttle services, ridesharing activities and MTA bus services. Millions of dollars of grant funds have been awarded to the City for projects identified in the "Blueprint for the 20th Century" that lists the City's long term transportation needs.

CDD's License and Code Services Program includes the issuance of business licenses, and collection of business taxes. There are over 5,000 code enforcement and property maintenance cases annually. Revenues collected total over $3,000,000 per year.

The housing authority is responsible for providing over 1,000 Section 8 vouchers for individuals whose incomes fall below 50% of the median in Los Angeles County. The Redevelopment Agency will be implementing approved capital improvement housing programs. The Planning Division anticipates processing approximately 150 applications, including various amendments, variances, developments and permits annually. The Transportation Division will be implementing their $47 million five-year capital improvement program utilizing grants, development impact fee revenues, and Redevelopment funding. The License and Code Services anticipates generating approximately $1.4 Million via the Business Tax and the Business License programs. In addition, they will investigate over 5,000 citizen and inspector generated complaints. Lastly the Building Division anticipates issuing over 7,100 permits, investigating 1,500 complaints and providing over 40,000 field inspections.

Economic Development, Redevelopment and Housing

This Division includes the Housing Authority that administers the federally funded Section 8 Housing Assistance Program and the Community Development Block Grant (CDBG) Program. Section 8 vouchers and certificates provide rental assistance for over 960 low income individuals and families. The CDBG Program assists in funding projects and activities that meet the low to moderate income national objective.

The Burbank Redevelopment Agency was established in 1970 with the adoption of the Golden State Project Area. Currently, there are four Redevelopment Project Areas: Golden State (near the Burbank-Glendale-Pasadena Airport), City Centre (Burbank Village and Media City Center Mall area), West

Olive (Media District area), and the newest project area South San Fernando (areas west of City Centre and south of City Center to the Glendale border). Activities conducted by the Agency include project management, economic development, real estate, residential rehabilitation, and low and moderate income housing development.

Agency activities are funded by 1% property tax increment revenues which are generated within each project area. Twenty percent of every tax increment dollar is required to be set aside for low and moderate income housing projects.

DEPARTMENT SUMMARY

	EXPENDITURES 2002-03	BUDGET 2003-04	BUDGET 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	65.000	60.000	60.000	
SALARIES & BENEFITS	$ 4,645,618	$ 4,524,447	$ 4,750,953	$ 226,506
MATERIALS, SUPPLIES, SERVICES	1,165,394	1,215,133	1,304,882	89,749
CAPITAL OUTLAY	2,592			
TOTAL	$ 5,813,604	$ 5,739,580	$ 6,055,835	$ 316,255

The Financial Services Department

The Financial Services Department is committed to quality and excellence, ensuring the financial integrity of the City and its related agencies while providing efficient courteous service.

The Budget Division coordinates the development of an annual budget adopted by the Council prior to the July 1 fiscal year. Responsibilities include preparation of a proposed budget for operating and capital projects, presentation of the budget through a series of City Council study sessions; and analysis of expenditures and revenues.

The annual budget for the City of Burbank (FY 2004-2005) is below:

City of Burbank 2004-2005 Budget

FUND/FUND GROUP	FY 2004-05 ADOPTED RESOURCES	FY 2004-05 ADOPTED APPROPRIATIONS
General Fund *	$ 117,070,490	$ 115,190,981
Special Revenue Funds (includes Capital Projects)	29,389,321	23,784,374
Internal Services Funds	30,573,462	29,318,167
Burbank Water & Power (Electricity & Water)	16,629,914	16,629,914
Water Reclamation & Sewer	2,175,971	2,105,360
Golf Fund	219,985,805	219,985,805
Refuse Collection and Disposal	11,906,200	11,906,200
Redevelopment Agency	42,314,451	39,864,448
Housing Authority	6,584,502	6,584,502
Parking Authority	992,329	982,738
TOTAL ALL FUNDS	**$ 477,622,445**	**$ 466,352,489**

Investor Relations Functions

Financial Services staff monitors all outstanding debt service obligations for the City and its related agencies. Responsibilities include debt service payments, meeting bond covenants, coordination of arbitrage covenants such as Continuing Disclosure, and bondholder relations. This site provides basic information as to current outstanding debt and the trustees handling bond matters.

The Purchasing Division handles the acquisition of materials, supplies and services to ensure the smooth operation of departments in providing services to the public. The division maintains a vendor list and through cooperation with the City Attorney's Office ensures that the Burbank Municipal Code relating to purchasing practices is followed.

The functions of the **Accounting Division** include all general accounting and also financial reporting as per GAAP and GASB standards through the publication of an Comprehensive Annual Financial Report (CAFR). Included in this Division is Accounts Payable, Payroll, Fixed Assets, Non Medical Employee Benefits, year-end audit coordination, and Internal Audit Activities.

The Revenue Division This Section is responsible for managing the revenue operations of the City, as well as accounting for the City's major revenue streams, such as Sales Tax and Property Tax. It is also responsible for the overall administration of the City's Billed Receivables inclusive of Property Damage, DUI Restitution, Assessment Districts, project billing for Burbank Water and Power, and other contractual obligations. A centralized Collections Unit which actively performs the collection of Citywide delinquent Accounts Receivables is also located in this division. In addition, the section manages contracted services such as Emergency Medical Services, Parking Citations Management and Administration, Sales Tax Auditing and Utility Users Tax Auditing.

DEPARTMENT SUMMARY

	BUDGET FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	37.950	34.450	33.000	(1.450)
SALARIES & BENEFITS	$ 2,637,370	$ 2,496,842	$ 2,466,261	$ (30,581)
MATERIALS, SUPPLIES, SERVICES	497,382	502,196	490,174	(12,022)
CAPITAL OUTLAY	1,981			
TOTAL	$ 3,136,733	$ 2,999,038	$ 2,956,435	$ (42,603)

The Burbank Fire Department

The mission of the Burbank Fire Department is to serve and protect our community through fire prevention and education, and rapid emergency response to prevent and mitigate threats to people, occupancies and the environment.

Preparedness public education services, weed abatement regulation and enforcement The Burbank Fire Department has 145 employees and operates six engine companies including one that is paramedic equipped and staffed, two ladder truck companies, and three paramedic rescue ambulances out of six strategically located fire stations. In addition, we respond a fully equipped hazardous materials vehicle staffed by fully trained and certified personnel. These personnel are

assigned in the dual role of Firefighter/Hazardous Material Technicians and rotate off one of the companies when necessary to respond to hazardous materials incidents. We also have a medium duty urban search and rescue (USAR) vehicle and the availability of several fully trained and certified Urban Search and Rescue (USAR) personnel. They also serve a dual role, to respond when needed to emergency requests for assistance for collapsed structures or trenches, swift water rescue, or other similar incidents.

The Fire Department responds to an estimated 8,000 emergencies including fires, Hazardous Materials incidents, medical assistance, rescues and miscellaneous calls for assistance annually.

The Department has six divisions identified in the budget. They include Prevention, Suppression, Emergency Medical Services, Disaster Preparedness, Emergency Medical Membership, and Fire Equipment Maintenance. We provide a full range of services including, but not limited to, paramedic and emergency medical transportation, disaster, public fire education, pre-fire planning, and fire protection analysis. However, two other functional divisions, Administration and Training, play a significant role in the day- to-day operations of the Department.

The Fire Prevention Division, with ten personnel and a clerical staff of two, is specifically charged with anticipating and reducing the potential for fire by enforcing related laws, codes, and ordinances through business license and annual inspections of all occupancies, in addition to providing safety education programs. It is also responsible for the investigation of fires and the prosecution of those individuals found to blame for fires of an incendiary or arson related nature. Additionally, the Division is responsible for administering the State-mandated Hazardous Materials Disclosure and Underground Storage Tank Programs. This Division derives revenue from permit and plan check fees, hazardous materials disclosure and underground storage tank fees, fire safety standby for filming fees, false alarm fees, fire protection systems testing fees, and other miscellaneous fire prevention fees. Together, these fees serve to offset a portion of the budgeted expenses of the Fire Prevention Division.

The Fire Suppression Division, with 120 personnel assigned, is the most visible and traditional of the fire department operations. This includes the 24 personnel assigned in the dual role of Firefighter/Hazardous Materials Technician. The specific goal of this Division is to provide sufficient personnel and equipment at the scene of all emergencies to quickly and efficiently provide or assist in any necessary actions to mitigate the threat to life and property. This includes responses to fires of all types, all hazardous materials incidents, a variety of rescue scenarios and other types of emergencies as needed. In addition, suppression personnel, certified as Emergency Medical Technicians (EMT-1), provide basic life support services throughout the City in support of the Paramedics assigned to the Rescue Ambulances, as well as performing company level fire prevention inspections on an annual basis.

The Emergency Medical Services Division, with 33 personnel assigned in the dual role of suppression firefighter/paramedics, provides the equipment and properly trained personnel to answer calls for medical assistance with basic and advanced life support skills. In addition, they can provide emergency ambulance services to transport the sick and injured persons to the appropriate medical facilities. In addition to their paramedic duties, these personnel also perform fire suppression duties as well as company level fire prevention inspections on an annual basis. The Burbank Fire Department also contracts with a pre-hospital care Physician, who serves as the department Medical Director, and a registered Mobile Intensive Care Nurse (MICN), who fulfills the role of Nurse Educator and provides the majority of the required medically related continuing education to all the fire department personnel.

The Administration Division is staffed with the Fire Chief, the Assistant Chief, a half-time Administrative Analyst and a clerical staff of three. It is charged with the development and enforcement of policies and procedures designed to enhance and maintain the optimum capabilities of the department to protect life and property from losses due to fire or other catastrophic occurrences, in addition to providing superior emergency medical intervention services. It prepares department budget estimates and requests, maintains department discipline, and prepares reports for and interacts with City officials.

The Training Division is staffed with one Battalion Chief and a half-time clerical position. It is responsible for the development and maintenance of the curriculum and the coordination of the training necessary to ensure that the department personnel are always at a fine-tuned state of readiness and currently aware of new technology that would enhance their effectiveness. This Battalion Chief also acts as the department Safety Officer and is responsible for keeping abreast of current and new hazards and providing information to all personnel to reinforce safe and responsible behavior at the scene of emergencies as well as in the performance of routine duties.

The Disaster Services Division is staffed with a Disaster Preparedness Coordinator and one half-time clerical position. It is responsible for providing disaster preparedness services to the community and coordinating the City Disaster Response Team.

The Emergency Medical Membership Program Division is staffed with a half-time Administrative Analyst and one clerical position. It is charged with the responsibility for the marketing, the enrollment and the overall administration of the Paramedic Membership Program.

The Equipment Division is staffed by a Fire Equipment Specialist and a Fire Equipment Mechanic and is charged with the responsibility of the maintenance and repair of all the automated fire department equipment and apparatus. This includes the development of specifications for the purchase and acquisition of new fire apparatus and ambulances and the on-going safety and performance testing of all emergency apparatus. In addition they provide continual training for all suppression personnel relative to the operational features of all motorized equipment and apparatus.

The Burbank Fire Department is an equity partner in the Verdugo Tri-City Agreement that brings together the fire resources of 23 fire stations in the three cities of Burbank, Glendale, and Pasadena. The three departments are all dispatched from the Verdugo Communications Center, staffed and operated by, and located in, the City of Glendale. Each of the three cities shares the cost of operating and maintaining this dispatch facility.

The Verdugo System Agreement, utilizing an Automatic Aid concept, provides each of the three member cities with the resources, both personnel and equipment, to deal with most major incidents within their jurisdiction within minutes of a request. The fire suppression resources are dispatched regardless of city boundaries, providing resources for major occurrences in any city while also providing appropriate move-ups into key stations to cover for subsequent additional emergency needs. In addition, by contractual agreement, six other cities are being dispatched through the Verdugo Communication Center. They are San Marino, South Pasadena, Sierra Madre, San Gabriel, Monrovia, and Arcadia.

The Burbank Fire Department is also signatory to an Automatic Aid Agreement with the Los Angeles City Fire Department, with whom we share a common border. They will provide us with fire fighting resources in the form of helicopters and equipment for the brush fires that seem to occur on an annual basis as well as High Rise Incidents. In exchange the Burbank Fire department provides first responder fire and EMS service to the Equestrian Center, Lakeside Golf Club, and backup EMS Services to the Villa Cabrini Condominium Complex and surrounding areas.

The City of Burbank is currently a Class 2 Insurance Services Office (ISO) rated City, covering approximately 17 square miles.

The Burbank Fire Department responded to 8,469 alarms in Calendar Year 2002, including 6,513 calls for medical assistance, 1,371 fires of various types, in addition to 585 calls for other types of assistance.

Urban Search and Rescue

In the late 1970's, when the Verdugo Fire Communication Center was established under the Joint Communications Agreement, each department committed to provide a primary specialty for the three cities. Under contract, Burbank provides a Hazardous Materials team, Glendale provides an Air and Lighting unit as well as the dispatch center, and Pasadena provides a Heavy – Urban Search and Rescue team. As we, in Southern California, entered the 1980's and began to experience more severe seismic activity in the region, our department began to see the need for our own USAR team. After the Northridge earthquake, in the mid 90's, it became quite apparent that, had there been any major rescue needs with in the City of Burbank, we would have been without assistance.

The Burbank Fire Department has developed, and maintains, an Urban Search and Rescue program. The members assigned to this program have received additional training concurrent with their duties in fire suppression. All members, that have been rated for USAR, have received certified training in the following disciplines: basic rope rescue, high and low angle rope rescue, trench rescue, confined space rescue, and swift water technician 1&2. Individuals associated with the program are brought in for "continuing education" on a rotational basis.

Currently, the program is administered by the B Shift Battalion Chief and is coordinated by the station captains at Fire Station 11. At present, the department's goal is to maintain a minimum staffing level of two trained technicians per shift and, often times; there are three to four technicians on duty. Also, at any given time throughout the department, other individuals at other fire stations are trained technicians. These individuals can be utilized on large-scale incidents to augment the staffing already assigned to USAR 11 for that day.

USAR 11 is automatically dispatched to the following typed incidents: Trench Rescue, Confined Space Rescue, Over the Side/ High Angle Rescue, Building Collapse, and Alert may require specialized equipment unique to USAR. At the time of dispatch, a full assignment with USAR 11 will be toned out, as well as, USAR 32 from the City of Pasadena. At any time, USAR 11 may be requested by the cities of Pasadena and/or Glendale for assistance.

Fire Stations

Burbank Fire Headquarters
311 E. Orangegrove Ave.
Burbank, Ca. 91502

Fire Station 11
311 E. Orange Grove Ave.
Burbank, Ca. 91502

Fire Station 12
644 N. Hollywood Way
Burbank, Ca. 91505

Fire Station 13
2713 Thornton Ave.
Burbank, Ca. 91505

Fire Station 14
2305 W. Burbank Blvd.
Burbank, Ca. 91506

Fire Station 15
1420 W. Verdugo Ave.
Burbank, Ca. 91506

Fire Station 16
1600 N. Bel Aire Drive
Burbank, Ca. 91504

Fire Apparatus

Battalion 1
1996 Chevy Suburban, 4WD

Engine 11
1994 SeaGrave pumper, 1500GPM

Engine 12
2001 SeaGrave pumper, 1500 GPM

Engine 13
1994 SeaGrave pumper, 1500 GPM

Engine 14
1997 SeaGrave pumper, 1500 GPM

Engine 15
1997 SeaGrave pumper, 1500 GPM

Engine 16
1991 SeaGrave pumper, 1500 GPM

Truck 11
1990 SeaGrave 100 Foot Aerial

Truck 12
SeaGrave 100 Foot Aerial

Rescue Ambulance 11
2000 Freightliner FL60 Medic Master

Rescue Ambulance 13
2001 Freightliner FL60 Medic Master

Rescue Ambulance 15
2001 Freightliner FL60 Medic Master

Water Tender 16
1985 LNT 8000 Water Tender

Haz Mat 12
1988 Chevy step van

USAR 14
1985 Chevy pickup 4WD

Information Technology

The mission of Information Technology is to provide efficient, cost effective information services and support to all Burbank City Departments and to create and manage an integrated technology infrastructure that is responsive to current and future service demands.

In 2003 and 2004 Information Technology:

- Provided technical project management and support during the implementation of the Burbank Water and Power Customer Information system.
- Completed the initial Information technology Business Contingency Plan with input from all departments
- Successfully implemented Phase I of the Online Recreation Management System in partnership with Park, Recreation and Community Services
- Successfully implemented the Network Infrastructure Improvement Plan which included:

    1. Upgrade of network switches providing high speed communications throughout the city
    2. Upgrade of the City's firewall to protect against unauthorized intruders into the city's network and implementation of DMZ segment to enhance security for authorized web based transactions;
    3. Implemented intrusion detection and prevention device to enhance internet security;
    4. Implemented spam filter to reduce overhead on e-mail servers and eliminated unwanted and unsolicited e-mail from reaching out customers;
    5. Implemented network management and monitoring software that enables proactive monitoring software that enables proactive monitoring and problem resolution.
    6. Implemented a high capacity backup solution that runs parallel to the existing network that allows for data and application back up and recovery for all departments.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	30.800	29.925	32.275	2.350
SALARIES & BENEFITS	$ 2,429,933	$ 2,612,271	$ 2,857,261	$ 244,990
MATERIALS, SUPPLIES, SERVICES	806,479	653,858	788,163	134,305
CAPITAL OUTLAY	101,974			
TOTAL	$ 3,338,386	$ 3,266,129	$ 3,645,424	$ 379,295

Library

The mission of the Burbank Public Library is to provide access to information, recreation and education through a variety of media.

The Library fulfills its commitment to the future by providing stimulating materials and programs which encourage youth to become life-long learners.

To accomplish its mission, the Library operates two divisions: Technical Services and Public Services.

1. Technical Services include Technical Processing (acquisitions, cataloging, processing library materials); Automation Services (circulation, database maintenance, online public access Web-based catalog); and Branch Services.

2. Public Services include Adult, Children and Young Adult Services, and Literacy Services.

DEPARTMENT SUMMARY

	EXPENDITURES 2002-03	BUDGET 2003-04	BUDGET 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	71.189	66.769	66.360	(0.409)
SALARIES & BENEFITS	$ 3,622,716	$ 3,579,429	$ 3,660,205	$ 80,776
MATERIALS, SUPPLIES, SERVICES	1,372,484	1,353,521	1,348,429	(5,092)
CAPITAL OUTLAY	37,346	35,000	35,000	
	$ 5,032,546	$ 4,967,950	$ 5,043,634	$ 75,684

Management Services

The Management Services Department consists of three divisions: Administration; Labor Relations; Risk Management and Safety. The Department provides support services involving a wide range of internal administrative functions to City Department, and plays an integral role in enhance each department's ability to better serve the Burbank community.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	34.700	32.400	51.877	19.477
SALARIES & BENEFITS	$ 2,360,973	$ 2,118,744	$ 2,758,721	$ 639,977
MATERIALS, SUPPLIES, SERVICES	1,415,789	1,468,580	1,416,630	(51,950)
CAPITAL OUTLAY	12,002			
TOTAL	$ 3,788,764	$ 3,587,324	$ 4,175,351	$ 588,027

Park, and Recreation and Community Service

The Park, Recreation and Community Services Department plays an import role in the City of Burbank. It is responsible to provide well maintained recreational facilities, programs and activities to meet the social and human service needs of the residents, as well as employees. The two primary goals addressed by the department are to ensure the quality of life is enhanced and the activities provide parks and open space facilities that are beautiful, clean and safe.

In addition to the operation and maintenance of 29 public parks and facilities, the Park and Recreation and Community Services Department maintains most of the publicly owned landscaped areas and parkway trees throughout the City. The department is responsible for maintenance and improvements of municipal grounds and parkway trees, as well as the DeBell Golf Course and the Par 3 Gold Course. The Department is organized into four divisions: Parks Services, Administration, Recreation Services, and Senior and Human Services.

The department also provides recreation service programs that include special interest classes, youth and adult sports programs; day camps, after school programs, youth resource programs, youth transportation; environmental and educational nature programs; and cultural arts activities. The department also provides a variety of senior and human services programs. These include the Retired Senior and Volunteer Program, congregate and home delivered meal program, information and assistance services for all ages, transportation services including the Burbank Local Transit Commuter Services, Burbank Transportation Service System for seniors and the disabled, senior recreation activities, programs for the disabled, Art in Public Places Program, child care referral, and,advocacy services.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	179.121	189.323	177.690	(11.633)
SALARIES & BENEFITS	$ 8,796,962	$ 8,822,915	$ 8,891,144	$ 68,229
MATERIALS, SUPPLIES, SERVICES	5,687,497	5,415,815	5,339,167	(76,648)
CAPITAL OUTLAY	5,399	129,470	40,425	(89,045)
TOTAL	$ 14,489,858	$ 14,368,200	$ 14,270,736	$ (97,464)

Police/Fire Headquarters Facility

Police Department

The Mission Statement of the Burbank Police Department is to work in partnership with the community to achieve positive impacts on crime and traffic and to provide professional police services in an ethical and courteous manner.

The Police Department strives to maintain a ratio of 1.6 sworn officers for every 1,000 residents, as well as appropriate levels of civilian support personnel.

The Police Department consists five major divisions. They are:

1. Administrative Division which is under the Deputy Chief who reports to the Chief of Police. Each of the other divisions report to the Chief of Police through the Administrative Division. In addition the Administration Division manages the fleet, professional standards, Internal Affairs, Community Outreach, Personnel Services media relations and Background

2. Special operations Division which is responsible for the Computer Bureau, Records Bureau, Animal Shelter and Traffic Bureau.

3. Patrol Division which is responsible for the special response team (SRT), the beat patrols and the Communication Center. At the core of any police department is the Patrol Division. It provides police service to our community 24 hours a day. Officers within the division generally work in uniform and drive "marked" (black and white) police cars. The officers' primary duties include answering calls for assistance from our citizens, engaging in crime prevention through proactive patrol, reducing traffic problems by both preventative and enforcement efforts, conducting initial investigations, taking crime reports, and maintaining a commitment to our city's community policing efforts. Many other policing units or tools are used to assist the patrol officers in this effort. They include the Bicycle patrol, K-9 unit, Air Support (Helicopter), Communications Center, and Retail Crime Unit. Due to the Patrol Division's mission, it is the largest policing unit within the department and the most visible. It is under the command of a Police Captain who is assisted by four Lieutenants also known as Watch Commanders.

4. Investigation Division is responsible for managing the jail and investigation crimes against persons and property. The Burbank Police Department Jail houses up to 73 felony and misdemeanor arrestees until their criminal arraignments unless they are released on bond, bail or citation. Its modern modular design allows it to be safely operated by a minimum staff of two jailers at a time.

People sentenced to jail time in other jurisdictions often request to serve their time here instead, and pay $85 a night to stay in our jail instead of the one in the city where they were sentenced.

5. Finance Division is responsible for citation management, payroll, purchasing, grants and asset forfeiture.

Burbank's Crime Statistics

The table below gives an historical perspective of our crime picture. We can be extremely proud of the job done by the fine men and women of this Department, and equally happy with the tremendous community support which allows us to be so effective. We sincerely hope that Burbank's citizens and its Police Department will maintain that excellent partnership, and that we can continue our outstanding accomplishments well into this new century.

FBI CRIME RATE (Crime Index Per 1,000 Population)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Burbank	43.1	48.8	48.0	48.4	47.0	41.7	40.7	36.5	30.2	26.4	31.6	33.0	31.5

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	280.735	277.735	272.235	(5.500)
SALARIES & BENEFITS	$ 25,784,137	$ 27,191,483	$ 28,009,981	$ 818,498
MATERIALS, SUPPLIES, SERVICES	4,137,682	4,335,330	4,986,343	651,013
CAPITAL OUTLAY	43,701			
TOTAL	$ 29,965,520	$ 31,526,813	$ 32,996,324	$ 1,469,511

Public Works

The key objectives of the Public Works Department are to provide for the efficient operation of public works systems and programs such as wastewater treatment, sewer maintenance, street design and maintenance, street sweeping, solid waste collection, recycling and landfill disposal, public building maintenance, equipment maintenance, traffic and parking management, and graffiti removal; while protecting the environment and responding to the changing needs of the citizens.

Capital Projects

Capital Projects is responsible for the City's general government capital improvement projects program which currently includes the Development and Community Services Building, Civic Center Plan, Robert Ovrom Park/BUSD School/South San Fernando Streetscape, Debell Clubhouse and Driving Range Remodel and DeBell Golf Facilities Master Plan and Library Master Plan State Grant application.

Engineering/Environmental Services

PERMITS - The Permits Section of the City of Burbank Public Works Department processes and issues permits for individuals, businesses, and other organizations. Most of these permits relate to work conducted in the public right of way. The Permits Section also maintains City records and files related to construction plans, survey data, and cadastral plat maps.

STREET DESIGN AND CONSTRUCTION - The Street Construction and Design Section is responsible for the construction and design of street improvement and concrete replacement projects and for providing technical engineering and administrative support to other City departments.

WATER RECLAMATION AND SEWER - The Public Works Department owns and operates the City of Burbank's sanitary sewer system and the Burbank Water Reclamation Plant (BWRP). All costs associated with the City's sewer system and the BWRP are funded by the Water Reclamation and Sewer Fund (Fund 494), also known as the Sewer Enterprise Fund. The Fund's primary source of revenue is the Sewer Service Charge paid by residents and businesses for sewer services. The Public Works Department administers the Sewer Enterprise Fund. All fees associated with the City of Burbank's sewer system are set in the City of Burbank Fee Schedule, which is amended annually by the City Council (BMC Chapter 25, Article 10, Section 8).

HISTORY AND BACKGROUND. The City of Burbank Water Reclamation Plant (BWRP) is a tertiary wastewater treatment plant that currently treats 9 million gallons of sewage per day (MGD). The BWRP was built in 1966 to meet the wastewater and sewer needs of the growing residential population and expanding commercial industries located in the City of Burbank. Before the BWRP was built, the City of Burbank sent all of its wastewater to the City of Los Angeles for treatment and disposal.

Originally built to treat 6 MGD, the City upgraded the BWRP to the current 9 MGD in 1971. The plant was upgraded in 2000 to ensure that its meets new stringent regulations raising the quality of the cleaned wastewater it discharges after the treatment process. The plant was upgraded again in 2002 to remove ammonia from the wastewater.

REHABILITATION OF EARTHQUAKE DAMAGED SEWER SYSTEM - PHASE 5. The City is in the process of completing the fifth and final stage of a major project to rehabilitate parts of the City's sanitary sewer system that were damaged during the 1994 Northridge earthquake. Phases 2 through 5

were funded with a grant from the Federal Emergency Management Agency (FEMA). Phase 5 includes the lining of 36,955 linear feet of sewer pipe to seal cracks and prevent new damage.

NORTH OUTFALL SEWER CONNECTION. The City of Burbank is in the beginning stages of a project to construct a new connection to the City of Los Angeles's North Outfall Sewer (NOS) at the intersection of Beachwood Drive and Valleyheart Drive. The NOS conveys sewage slated for final treatment at the City of Los Angeles's Hyperion Treatment Plant.

CCTV. The City of Burbank is undergoing the Closed Circuit Television (CCTV) inspection of its sanitary sewer pipes. Many of the pipes will be inspected at night when sewage flow is the lowest. This CCTV inspection will allow the city to discover any damage in the City's sewer system.

FLEET AND BUILDING MAINTENANCE - Fleet and Building Maintenance provides maintenance and repair for all City equipment and buildings. Fleet Maintenance repairs a diverse range of vehicles and equipment. Building Maintenance consisting of Facilities Maintenance and Custodial Services, maintains and repairs all non –Burbank Water and Power City facilities. Facilities Maintenance, comprised of construction and maintenance, carpentry and painting, maintains 650,000 square feet square feet in 70 buildings, while custodial services cleans 425,000 square feet of occupied space in 24 buildings.

RECYCLE CENTER - Owned by the City, the Burbank Recycle Center is a private/public partnership with BLT Enterprises, Inc., a privately-owned, Southern California based company specializing in materials recovery facilities, transfer stations, and the processing and marketing of recyclable materials. The current Recycle Center opened in October 1992 and houses a Materials Recovery Facility, Buyback/Drop off Center, Used Oil Center, Compost Corner, and Learning Center.

STREET AND SANITATION - The Street and Sanitation Division of the Burbank Public Works Department is responsible for the collection of refuse, green waste, recyclables, and bulky items. Refuse collection crews service all single-family residences, 50% of multi-family residences, and approximately 10% of the City's commercial/industrial refuse customers. The Division is also responsible for maintaining concrete and asphalt improvements within the City's street and alley right-of-ways, weed abatement, street sweeping, private property graffiti removal, flood control, and disaster preparedness related to street maintenance.

TRAFFIC - The Traffic Division of the Burbank Public Works Department is responsible for all traffic-related design, operation, maintenance, and parking management functions for the City. This includes traffic design, plan checking and permitting, administration, traffic planning, and installation and maintenance of traffic signals and signs, and traffic striping. This division is comprised of the following three sections: Engineering and Design, Signs and Painting, and Signal Maintenance.

DEPARTMENT SUMMARY

	EXPENDITURES FY 2002-03	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	122.000	116.000	116.000	
SALARIES & BENEFITS	$ 7,726,188	$ 8,027,695	$ 8,320,511	$ 292,816
MATERIALS, SUPPLIES, SERVICES	4,836,398	4,713,096	4,832,960	119,864
CAPITAL OUTLAY	17,962		34,712	34,712
TOTAL	$ 12,580,548	$ 12,740,791	$ 13,188,183	$ 447,392

Burbank Power & Water Department

The Burbank Water and Power (BWP) Mission is to provide water and electric services to customers in a safe and reliable manner while providing stable and competitive rates. Burbank Water and Power (BWP) is a community-owned utility that serves the City of Burbank with water, electrical and fiber optic services. Burbank has about 45,000 households with over 100,000 residents.

Burbank Water and Power serves the City of Burbank's residents and businesses. Burbank is home to about 6,000 businesses ranging from major movie production studios and high-rise buildings to small Mom and Pop businesses. To each, BWP offers safe and reliable water and electric service at a fair price.

The Power Supply Division ensures that reliable, cost-effective electric energy is available to Burbank customers. This Division ensures the optimal use of power resources, utilizing an economic mix of local generation and regional resources. The Division also provides competitive telecommunications services using our telecommunications infrastructure. The Division is in the process of constructing the Magnolia Power Project with an estimated completion date of May 2005. The Division is also responsible for construction support and facility maintenance services.

The Electric Services Division designs, constructs, operates and maintains the BWP electrical distribution facilities in Burbank, including overhead and underground electrical lines, switching stations, distributing stations, and customer stations. The Division also maintains electrical facilities for the Water Systems Division and for BWP's Power Plants. The Division maintains the City's street lighting system (Fund 129), the City's radios and phones (Fund 535), and installs fiber optic lines. The BWP Finance Division is responsible for financial planning and analysis, financial reporting, budgeting, energy risk management, and ensuring access to capital markets and obtaining financing. The Division is also responsible for internal controls for BWP, which ensure the integrity of financial information regarding department operations, and support operations for the other divisions including warehousing and fleet maintenance.

The Customer Service Division is responsible for customer account and revenue management, including: call center, applications for service, meter reading, billing, payment processing, credit and collections, mail center, and marketing and customer programs.

The Water Division provides domestic water, reclaimed water and fire suppression water to the citizens of Burbank. The City purchases approximately 53% of its water supplies from the Metropolitan Water District (MWD) of Southern California. The Division operates and maintains treatment, storage, and distribution facilities for the City's water systems. The Division also provides water equal to or better than State or Federal drinking water standards. The Division is also responsible for security of the utility.

BWP has been providing service to Burbank's citizens and businesses since 1913.

History

1886 The Providencia Land, Water and Development Company is formed to serve the area which will eventually become the City of Burbank.

1911 The City of Burbank is incorporated.

1913 Burbank sells $20,000 in bonds to purchase the existing electric facilities. Burbank sells $50,000 in bonds to purchase the existing water facilities from L.C Brand and El Miradero Water Company. The Power & Water (PSD) begins operations.

1913 The first power is distributed within the limits of the City of Burbank, supplied by the Southern California Edison Company.

1914 The domestic water works system is established.

1916 Additional bonds are approved for building additional electric distribution facilities. Power was purchased from the Southern California Edison company via McNeil Distributing Station on Chandler Blvd.

1927 In January, when the Charter of the City of Burbank was enacted, the rules and regulations guiding the Power & Water were developed. PSD administration is under the direction of the City Manager and the Burbank City Council.

1928 Burbank is one of the first 13 cities to join the Metropolitan Water District (MWD). MWD is destined to become the largest supplier of water in the world.

1931 The City enters into a 50-year contract for energy from Hoover Dam to the extent of 5,109 kilowatts of demand and 25 million kilowatt-hours per year. At the time, experts thought this was a foolish plan.

1934 Negotiations were completed for the purchase of some of the remaining Edison facilities at a cost of $90,000.

1937 The first power from Hoover Dam is distributed over Burbank's own lines.

1941 Magnolia No. 1 (10,000 Kilowatts), Burbank's first steam unit is placed in operation in October. Magnolia No. 2 (10,000 kilowatts) went into service a year later. The Santa Monica Feeder is completed with three inter-connections with Burbank's water system.

1943 Water consumption has increased 520 percent over the last 20 years, while the population has increased only 414 percent, largely as a result of rapid industrial growth during World War II.

1947 The Valley Pumping Plant is constructed.

1948 Magnolia No. 3 steam unit (20,000 kilowatts) is placed in service.

1949 The administration building is completed in July replacing a small wood and stucco building which had been in use for over 27 years.

1953 Magnolia No. 4 steam unit (30,000 Kilowatts) is placed in service.

1955 Reservoir Numbers 4 and 5, with 11 million and 25 million gallon capacity, respectively, are constructed and placed into service.

1958 Burbank citizens approve a charter amendment authorizing a transfer of funds to Burbank's General Government of two percent of electrical sales for street lighting purposes and five percent of water sales in lieu of taxes.

1959 The Olive Power Plant is constructed and Olive No. 1 steam unit (42,000 kilowatts) is placed into service.

1968 Exchange Agreement for 40 MW of Pacific Northwest Power executed with Bonneville Power Administration. Necessary for use of DC Intertie.

1969 Magnolia No. 5 gas turbine (17,000 Kilowatts) is placed into service.

1970 Pacific Northwest-Southwest DC Intertie placed in operation. (Burbank's share is 56 megawatts.)

1972 Olive No. 3 gas turbine (22,000 kilowatts) is placed into service.

1975 Olive No. 4 gas turbine (31,000 kilowatts) is placed into service.

1977 The Power & Water Advisory Board is established to assist the City Council in decisions relating to the functions of the Power & Water.

1980 A major fire burns through the hillside area of Burbank in November. The roof of Reservoir No. 1 is destroyed and the sidewalls are damaged. The City submits a claim to the Federal Emergency Management Association for financial assistance.

1985 The first 12,470 volt station begins operation (San Jose). This begins an effort to convert the electric distribution system from 4,160 volts to 12,470 volts.

1985 DC Intertie voltage upgrade from 400kV to 500kV is completed (Burbank's line capacity is now 70 megawatts).

1986 The first fiber-optics link is installed by PSD to Information Systems. Local production of groundwater for City domestic use ends in July due to volatile organic compound contamination from local industry run-off.

1987 The Intermountain Power Project is completed. Burbank's 67,000 kilowatt share of this 1,600,000 kilowatt coal plant will supply up to 50% of the City's energy. The Los Angeles Regional Water Quality Control Board (RWQCB) issues a clean up and abatement order to Lockheed Aeronautical Co. for clean up of various Burbank properties.

1987 A "renewal" agreement is signed with Western Area Power Administration for Hoover Dam power for 5,125 kilowatts of capacity and associated energy. An "up-rating" agreement is signed for an additional 15,000 kilowatts of Hoover Dam Power, with very little associated energy, which raises the total Hoover entitlement to 20,125 kilowatts by 1993.

1988 25-year Power Sales agreement is signed with Portland General Electric for 10,000 kilowatts of capacity and exchange energy.

1988 Burbank executes a 20-year, 40,000 kW power sales/exchange agreement with Bonneville Power Administration. (Successor to 1968 agreement).

1989 DC Intertie Expansion to 3,100 MW completed (Burbank's line capacity now 105 MW).
Reservoir No. 1 is rehabilitated and returned to service in June.

1990 The City signs the EPA Consent Decree for groundwater clean up in the Burbank area.

1991 Natural gas pipeline capacity is acquired on the PGT/PG&E Pipeline Expansion Project.
The City signs the EPA Consent Decree for groundwater clean up in the Burbank area.

1992 The new "Supervisory Control and Data Acquisition" (SCADA) system is completed. The EPA Consent Decree is entered in Los Angeles Federal District Court.

1992 The Granular Activated Carbon Treatment Plant comes on line, treating contaminated groundwater. The system produces approximately 12% of Burbank's water supply.

1992 PSD completes a revenue bond sale of $17 million for the expansion of electric capital facilities and $10 million for the expansion of domestic and reclaimed water systems.

1993 Natural gas pipeline capacity is acquired on the El Paso Pipeline System. The City begins construction of the EPA Consent Decree Project, which will include a sixth interconnection to MWD. The City receives approval for a State Water Reclamation Loan for the expansion of the reclaimed Water System.

1995 The City begins operation of the expanded Reclaimed Water System with service to the De Bell Golf Course

1996 The initial Citywide Fiber Optic System is placed into operation. The City begins to receive treated groundwater from the EPA groundwater Recovery Treatment Plant under the provisions of the Consent Decree.

1996 The Mead/Phoenix and Mead/Adelanto Transmission Projects placed in operation. Burbank's share is 35 megawatts & 94 megawatts, respectively.

1996 AB 1890 deregulating California's electric industry is approved.

1997 Fiber Optic System interconnected with Los Angeles Department of Water and Power.
The City signs the EPA Consent Decree II which will cover the operation and maintenance of the Groundwater Recovery Treatment Plant until the year 2018.

1997 The first electric station is completed that is dual purpose, serving both a major company (Walt Disney) and the surrounding neighborhoods. It is the 12,470-volt, 60 MVA Keystone Distributing Station.

1998 PSD Competitiveness Transition Plan approved by City Council.

1998 Magnolia No. 3 steam units are retired.

2000 Magnolia Power Plant project is created

2001 PSD changes its name to Burbank Water and Power. Microturbines operating in landfill.

2002 Construction begins on Lake No. 1, a modern 47 MW peaking unit. The import capacity of RSE is more than doubled.

Current and Future Resources

Power Plants: Lake One

On July 18, 2002, Burbank Water and Power (BWP) proudly dedicated its new Lake One power plant. Lake One is a 47-megawatt power plant located on-site at BWP, that is already helping BWP meet the City's demand for summer power. Lake One will replace existing power plants that are about 25 years old. The Lake One project is noteworthy for a number of reasons:

- Lake One uses about 25% less fuel than the existing power plants that it will replace while producing 95% less nitrogen oxide emissions (a key ingredient of smog).
- As an on-site power plant, Lake One has the advantage of allowing BWP to provide power to Burbank in the event of a blackout, such as might occur following an earthquake or other disaster.
- Lake One can be started quickly and produce full power within ten minutes.

The Burbank City Council authorized the power plant in June 2001. The project was licensed, financed, designed, and constructed in one very busy year! BWP brought this project in on time and on budget.

Valley Pumping Plant

Burbank Water and Power (BWP) is very pleased to announce the July 2002 installation of two hydro generators at its Valley Pumping Plant. Burbank Water and Power purchases water from the Metropolitan Water District. This water comes to us under high pressure. BWP will now be using that high-pressure water to run two turbine generators. This innovative system will produce over one million kilowatt-hours of electricity annually, requiring no fuel and producing no pollution! This amount of energy is enough to run about 200 households.

In the past, BWP has investigated the use of hydro generation for power production. Recent modifications to the City's water system now make it feasible. The most significant change involves the construction of the Burbank Operable Unit. This required the utility to import high-pressure water supplies from the Metropolitan Water District to the Valley Pumping Plant. This high pressure means excess energy, which BWP is able to harness with turbine-generators. The change in pressure energy is converted into over one million kilowatt-hours of electricity annually. This is enough power to meet the energy needs of 200 households for an entire year. And better yet, this process requires no fuel and produces no pollution.

Alan E. Capon Switching Station

On August 20, 2002, Burbank Water and Power held a dedication ceremony to mark the opening of a new electrical switching station. A switching station supplies power to electric distribution stations that serve customers directly. A key element and advantage of a switching station is that it allows for power to come from multiple sources. The energy a switching station receives can come from Burbank's own power plants or from another power plant located hundreds of miles away. This switching station:

- Delivers as much power as Valley Switching Station while requiring only 1/8 of the land usage.
- Can meet the electrical needs of the Media District now and into the foreseeable future.
- Has NO exposed high voltage energized parts.

- Requires very low maintenance.
- Is safer due to automated switching.
- Has less visual impact and was designed to match its current surroundings.

Solar Heated McCambridge Pool

In July 2002, the City of Burbank began heating the McCambridge Park pool with a solar water heating system. The system works by pumping water to the roof where it runs through sunlight-absorbing solar panels. As the water travels through these solar panels it collects the sun's radiant energy.

The water that is returned to the pool is naturally heated and with no adverse environmental impact. We partnered with Environmental Solar Design to install 4,500 square feet of solar collecting panels on the southern exposure of the McCambridge gymnasium roof.

Burbank partnered with Environmental Solar Design to install 4,500 square feet of solar collecting panels on the southern exposure of the McCambridge gymnasium roof.

Magnolia Power Project (MPP)

In 1999 the City of Burbank began exploring ways to replace its aging power plants. The City decided that it would be more economical to build a large plant and include other SCPPA participants to buy the power that would be produced by the larger plant. The generation project is comprised of six members, which are the cities of Anaheim, Burbank, Colton, Glendale, Cerritos and Pasadena. The City of Burbank's ownership share of the Magnolia Power Project is 30.992 %.

In March 2003 the California Energy Commission gave the approval for construction of the MPP. The Magnolia Power Project is a natural gas fired generator and is designed to generate 242 megawatts to meet base load capacity but will be able to generate more than 300 megawatts during peak demand periods. MPP is the first plant to be owned by the Authority. The City of Burbank will manage the construction and operation of the Project.

Burbank Water and Power Unveils Innovative Reclaimed Water Treatment System

In continuing its long-term commitment to environmental stewardship, Burbank Water and Power (BWP) installed a innovative Reclaimed Water Treatment System at BWP's on-site power plants. This system will reduce BWP's use of potable (drinking) water by as much as 70,000 gallons per day. The water treatment system takes reclaimed wastewater from the City's sewage treatment plant through a series of refining steps, producing water pure enough for use in BWP's power plants. By dramatically reducing the amount of potable water used in producing electricity, BWP has cut costs in half while taking an important environmental step in conserving water. Previously, the wastewater was simply discharged into the storm drain after being cleaned at the sewage treatment plant. With the advent of this project, the water lives again, helping to produce electricity. City Councilwoman Marsha Ramos made the following comments.

"Burbank is up and running with a system that produces ultra pure demineralized water from reclaimed water for use in our combustion turbine and steam units. When this purified water is turned into steam, it leaves no residue.

I'm particularly proud of what this accomplishment represents for Burbank. Because this system uses water from the Burbank Water Reclamation Plant, and uses no potable water, Burbank is able to save between 60,000 to 100,000 gallons of potable water a day. This is a great example of water conservation, which we so actively impress upon the community. Living in Southern California, we learn how to use and reuse water in ways others have not considered. Back in 1968, our power plants were the first to use reclaimed water for cooling. Now, Burbank is the first to use reclaimed water to make water pure enough to be used to power our turbines. It's extremely impressive that this new system saves the City $160,000 per year compared to the old system."

DEPARTMENT SUMMARY

	BUDGET FY 2003-04	BUDGET FY 2004-05	CHANGE FROM PRIOR YEAR
STAFF YEARS	321.500	315.500	(6.000)
SALARIES & BENEFITS	$ 20,166,220	$ 21,798,638	$ 1,632,418
MATERIALS, SUPPLIES, SERVICES	140,728,377	170,047,650	29,319,273
CAPITAL OUTLAY	5,388,550	5,908,102	519,552
CAPITAL IMPROVEMENTS	20,321,041	22,231,415	1,910,374
TOTAL	$ 186,604,188	$ 219,985,805	$ 33,381,617

General Facilities

The Burbank-Glendale-Pasadena Airport Authority Operating the Bob Hope Airport

The Burbank-Glendale-Pasadena Airport Authority is a separate government agency created under a joint powers agreement between the three cities of Burbank, Glendale and Pasadena in 1977 for the sole purpose of owning and operating the Bob Hope Airport. The Authority consists of nine commissioners, three from each city. The commissioners from each city are appointed by their city council.

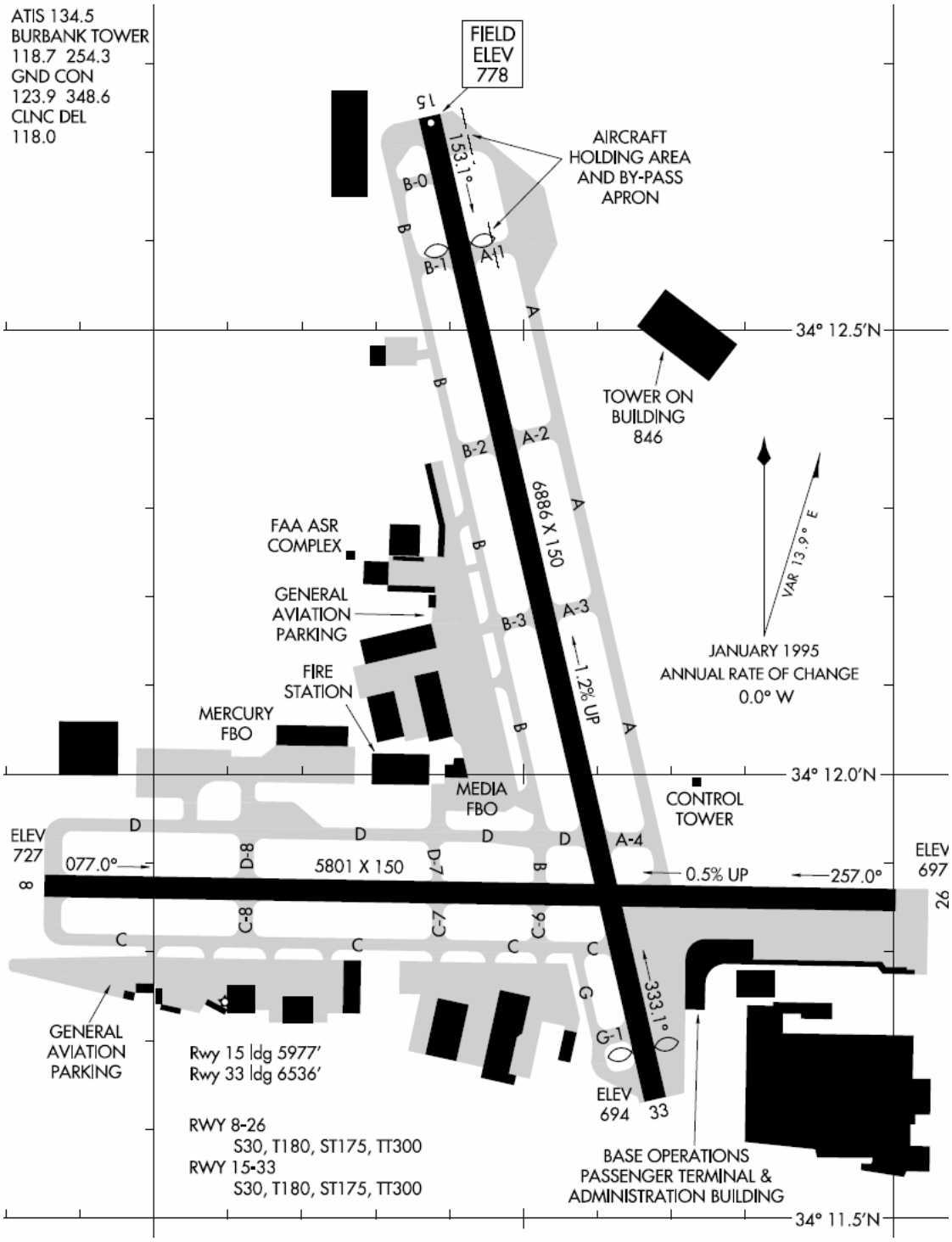
The City of Burbank considers the Bob Hope Airport to be a significant transportation incident accident risk to the City of Burbank and its citizens. (See Transportation in Section 3 and Aviation Accident in Section 4)

The Bob Hope Airport is the source of most air traffic in the City of Burbank. The airport is located in the northwestern corner of the City. The airport has been in operation since 1930, both as a private venture and as a public transportation facility. Lockheed bought the airport in 1940 and operated it until 1978 when the Burbank, Glendale, Pasadena Airport Authority—a joint powers authority—bought the facility. The Airport Authority runs the airport and maintains a contract with Airport Group International, Inc., to provide daily operations and maintenance. The Bob Hope Airport serves commercial airlines, as well as military aviation and general aviation needs. The following table shows the proportionate use of the airport facility by each type of aviation.

AIRCRAFT OPERATIONS 1995 AND 1996

	AIR CARRIER	GENERAL AVIATION & AIR TAXI	MILITARY	TOTAL
1995	34.3%	65.5%	0.2%	100%
1996	32.0%	67.8%	0.2%	100%
PERCENT OF CHANGE	-2.3%	+2.3%	0	

In 1996 approximately 4.8 million passengers utilized the airport facility. It is forecasted that passengers served by the airport could more than double over the next 15 years with a forecasted 10 million passengers using the Burbank facility annually by the year 2010. There was an average of 85.5 commercial flights departing Burbank daily in 1996; this number is forecasted to reach 143 departures daily in the year 2010.


ATIS 134.5
BURBANK TOWER
118.7 254.3
GND CON
123.9 348.6
CLNC DEL
118.0
FIELD ELEV 778
15
153.1°
AIRCRAFT HOLDING AREA AND BY-PASS APRON
B-0
B
B-1
A-1
A
34° 12.5'N
TOWER ON BUILDING 846
B-2
A-2
6886 X 150
FAA ASR COMPLEX
GENERAL AVIATION PARKING
B-3
A-3
1.2% UP
VAR 13.9° E
JANUARY 1995
ANNUAL RATE OF CHANGE
0.0° W
FIRE STATION
MERCURY FBO
34° 12.0'N
MEDIA FBO
CONTROL TOWER
ELEV 727
D
077.0°
D-8
5801 X 150
D-7
A-4
0.5% UP
257.0°
ELEV 697
8
26
C-8
C-7
C-6
C
G
333.1°
G-1
GENERAL AVIATION PARKING
Rwy 15 ldg 5977'
Rwy 33 ldg 6536'
ELEV 694
33
RWY 8-26
S30, T180, ST175, TT300
RWY 15-33
S30, T180, ST175, TT300
BASE OPERATIONS PASSENGER TERMINAL & ADMINISTRATION BUILDING
34° 11.5'N

Inventory of Assets

PREPARED BY
Driver Alliant Insurance Services
1301 Dove Street
Suite 200
Newport Beach, CA 92660 (949) 756-0271

PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: BURBANK FIRE
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Sprklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents	Year	Real Property	Personal Property	BI / Rents	Totals
13		FIRE DRILL TOWER	2,000 SQ. FT.	Class: A	No	1950	0	EQ: B2	No	No	No	*2004*	*$169,519*	*$0*	*$0*	*$169,519*
Your Location		ONTARIO ST & PACIFIC AVE.	FIRE DRILL TOWER	NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$185,149**	**$0**	**$0**	**$185,149**
FIRE		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
121		FIRE STATION 16	6,000 SQ. FT.	Class: C	Yes	1988	0	EQ: B2	No	No	No	*2004*	*$941,933*	*$216,160*	*$0*	*$1,158,093*
Your Location		1600 N. BELAIRE DR		MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$1,028,779**	**$225,001**	**$0**	**$1,253,780**
FIRE		BURBANK CA 91504	Fire Station	Notes:				Rent Notes:								
				Alarms:												
122		FIRE STATION 12	13,000 SQ. FT.	Class: B	No	1988	0	EQ: B2	No	No	No	*2004*	*$1,397,174*	*$457,262*	*$0*	*$1,854,436*
Your Location		644 N. HOLLYWOOD WAY	FIRE DEPARTMENT 12	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$1,525,993**	**$475,964**	**$0**	**$2,001,957**
FIRE		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
123		FIRE DEPT. TRAINING COMPL	4,600 SQ. FT.	Class: B	No	1988	0	EQ: B2	No	No	No	*2004*	*$501,726*	*$163,900*	*$0*	*$665,626*
Your Location		1811 NORTH ONTARIO ST.	TRAINING COMPLEX	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$547,985**	**$170,604**	**$0**	**$718,589**
FIRE		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
141		FIRE STATION #13	16,931 SQ. FT.	Class: CB	No	1992	0	EQ: B2	No	No	No	*2004*	*$2,387,041*	*$235,386*	*$0*	*$2,622,427*
Your Location		2713 THORNTON ST	FIRE STATION 13	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$2,607,126**	**$245,013**	**$0**	**$2,852,139**
FIRE		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												
142		FIRE STATION #14	8,315 SQ. FT.	Class: CB	No	1992	0	EQ: B2	No	No	No	*2004*	*$1,543,281*	*$115,600*	*$0*	*$1,658,881*
Your Location		2305 W. BURBANK	FIRE STATION 14	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$1,685,572**	**$120,328**	**$0**	**$1,805,900**
FIRE		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
143		FIRE STATION #15	8,315 SQ. FT.	Class: A	No	1992	0	EQ: B2	No	No	No	*2004*	*$1,543,281*	*$115,600*	*$0*	*$1,658,881*
Your Location		1420 W.VERDUGO BLVD	FIRE STATION 15	NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$1,685,572**	**$120,328**	**$0**	**$1,805,900**
FIRE		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												

PREPARED BY
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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Page 2

Includes B & M
Filter: BURBANK FIRE
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

December 17, 2004

Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	*$8,483,955*	*$1,303,908*	*$0*	*$9,787,863*
SPRINKLERED:	2004	*$941,933*	*$216,160*	*$0*	*$1,158,093*
UNSPRINKLERED:	2004	*$7,542,022*	*$1,087,748*	*$0*	*$8,629,770*
EARTHQUAKE:	2004	*$0*	*$0*	*$0*	*$0*
FLOOD:	2004	*$0*	*$0*	*$0*	*$0*

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$9,266,176	$1,357,238	$0	$10,623,414
SPRINKLERED:	2005	$1,028,779	$225,001	$0	$1,253,780
UNSPRINKLERED:	2005	$8,237,397	$1,132,237	$0	$9,369,634
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank POLICE
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
39		ANIMAL SHELTER, KENNEL	8,520 SQ. FT.	Class: M	No	1991	0	EQ: B2	No	No	No	*2004*	*$1,794,809*	*$92,546*	*$0*	*$1,887,355*
Your Location POLICE		1150 N. VICTORY PLACE BURBANK CA 91502	ANIMAL SHELTER, KENNEL	MIXED NON-COMB/COMB Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$1,960,290**	**$96,331**	**$0**	**$2,056,621**
41		GUN RANGE	3,246 SQ. FT.	Class: B	No	1960	0	EQ: B2	No	No	No	*2004*	*$307,596*	*$77,201*	*$0*	*$384,797*
Your Location POLICE		WILDWOOD CANYON RD BURBANK CA 91501	GUN RANGE	ALL REINFORCED CONCRETE Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$335,956**	**$80,359**	**$0**	**$416,315**
176		POLICE/FIRE HEADQUARTERS	282,991 SQ. FT.	Class: A	Yes	1998	9/04	EQ: B2	No	No	No	*2004*	*$29,150,200*	*$3,624,000*	*$0*	*$32,774,200*
Your Location POLICE ISO Code: 5		FIRE/ POLICE HEADQUARTERS 200 N. 3RD ST. BURBANK CA 91502 Stories: 4	CITY HALL - HIGH END AND PARKING STRUCTURE Pct. Spmkl: 100	NON COMB STEEL FRAME Notes: $30M PROJ COSTS INCL FFE & SITEWORK; 4-STY FIRE STATION C/O: 4-BAY DBL DEEP APPARATUS RM, REPAIR BAY, LUBE DLVRY & COMP AIR SYST, FUME EXHAUSTERS, 3T BRIDGE CRANE; OFFICES, COMP RM, FITNESS RM, KITCH, DAY RM & DORMS; 3-STY POLICE STATION/JAIL C/O: 911 CENTER, 70-BED JAIL, KITCH, PHOTO LAB, DRY LAB (CSI), OFFICES, CONF RMS, PUBLIC & STAFF RR'S; BELOW GRADE PKNG GARAGE (162,647 SF) Alarms: SPRINKLER SYSTEM, FIRE ALARM - MANUAL, FIRE ALARM - AUTOMATIC				Flood: X Rent Notes:	No	No	No	**2005**	**$31,821,118**	**$3,753,279**	**$0**	**$35,574,397**

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 2

Includes B & M
Filter: Burbank POLICE
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$31,252,605	$3,793,747	$0	$35,046,352
SPRINKLERED:	2004	$29,150,200	$3,624,000	$0	$32,774,200
UNSPRINKLERED:	2004	$2,102,405	$169,747	$0	$2,272,152
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$34,117,364	$3,929,969	$0	$38,047,333
SPRINKLERED:	2005	$31,821,118	$3,753,279	$0	$35,574,397
UNSPRINKLERED:	2005	$2,296,246	$176,690	$0	$2,472,936
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

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CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank Mgmt Servcs
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Sprklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents	Year	Real Property	Personal Property	BI / Rents	Totals
1		CITY HALL	42,462 SQ. FT.	Class: C	No	1940	9/04	EQ: B2	No	No	No	*2004*	*$8,515,670*	*$1,282,400*	*$0*	*$9,798,070*
Your Location		CITY HALL	CITY HALL - HIGH END	MASONRY CONST/WOOD ROOF				Flood: X	No	No	No	**2005**	**$9,336,381**	**$1,343,388**	**$0**	**$10,679,769**
MGMT SERVCS		275 E. OLIVE AVE.		Notes: C/O: ENTRY ATRIUM; 1ST FLR:				Rent Notes:								
ISO Code: 4		BURBANK CA 91502	Pct. Sprnkl: 0	INFO, TREASURER, CITY ATTORNEY,												
		Stories: 3/2/1		HUMAN RESOURCES; 2ND FLR: CITY												
				COUNCIL, AUD. W/SEATING & PODIUM,												
				VIDEO/SOUND SYST; BSMT: RECORDS												
				STORAGE, INFO TECH, & PRINTING												
				Alarms: FIRE ALARM - MANUAL, FIRE ALARM - AUTOMATIC												
1	B	PARKING STRUCTURE	110,928 SQ. FT.	Class: B	Yes	1977	0	EQ: B2	No	No	No	*2004*	*$4,194,263*	*$0*	*$0*	*$4,194,263*
Your Location		ORANGE GROVE STREET	PARK STRUCTURE	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$4,580,974**	**$0**	**$0**	**$4,580,974**
MGMT SERVCS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
72		CITY HALL ANNEX	23,750 SQ. FT.	Class: A	No	1965	9/04	EQ: B2	No	No	No	*2004*	*$3,944,900*	*$717,300*	*$783,000*	*$5,445,200*
Your Location		CITY HALL ANNEX	OFFICE/ADMINISTRATION	NON COMB STEEL FRAME				Flood: X	No	No	No	**2005**	**$4,076,343**	**$717,300**	**$783,000**	**$5,576,643**
MGMT SERVCS		301 E. OLIVE ST.		Notes:				Rent Notes:								
ISO Code: 5		BURBANK CA 91502	Pct. Sprnkl: 0													
		Stories: 3		Alarms: FIRE ALARM - MANUAL, FIRE ALARM - AUTOMATIC, EMERGENCY												
				LIGHTS												
140		PARKING STRUCTURE	0 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	*2004*	*$5,008,192*	*$0*	*$0*	*$5,008,192*
Your Location		133 ORANGEGROVE AVENUE	PARKING STRUCTURE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$5,469,947**	**$0**	**$0**	**$5,469,947**
MGMT SERVCS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
174		VEHICLES: $100,000 +	0 SQ. FT.	Class: V	No			EQ: B2	No	No	No	*2004*	*$0*	*$21,265,329*	*$0*	*$21,265,329*
Your Location		VARIOUS LOCATIONS	RC, COMP ON & OFF	VEHICLES				Flood:	No	No	No	**2005**	**$0**	**$21,265,329**	**$0**	**$21,265,329**
MGMT SERVCS		CA 91502	PREMISES	Notes: FLOOD COVERAGE FOR				Rent Notes:								
				PERSONAL/REAL PROPERTY												
				INCREASE IN VALUES DATED 11-19-02												
				FOR AMOUNT OF $11,984,709 PENDING												
				UNDERWRITER APPROVAL FOR												
				MIDTERM COVERAGE FOR 02-03												
				POLICY TERM.												
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 2

Includes B & M
Filter: Burbank Mgmt Servcs
Real Property Trend Factor: 9.22%
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175		VEHICLES <100K	0 SQ. FT.	Class: V	No			EQ: A3	No	No	No	*2004*	*$0*	*$17,577,825*	*$0*	*$17,577,825*
Your Location		VARIOUS LOCATIONS	RC COMP ON & OFF	VEHICLES				Flood:	No	No	No	**2005**	**$0**	**$17,577,825**	**$0**	**$17,577,825**
MGMT SERVCS		CA 95102	PREMISES	Notes: FLOOD COVERAGE FOR PERSONAL/REAL PROPERTY INCREASE IN VALUES DATED 11-19-02 FOR AMOUNT OF $9,497,588 PENDING UNDERWRITER APPROVAL FOR MIDTERM COVERAGE FOR 02-03 POLICY TERM				Rent Notes:								
				Alarms:												
177		CONTRACTORS EQUIPMENT	0 SQ. FT.	Class: E	No			EQ:	No	No	No	*2004*	*$0*	*$3,477,076*	*$0*	*$3,477,076*
Your Location		VARIOUS LOCATIONS		EQUIP (CONTRACT OR MOBILE)				Flood:	No	No	No	**2005**	**$0**	**$3,477,076**	**$0**	**$3,477,076**
MGMT SERVCS		BURBANK CA		Notes:				Rent Notes:								
				Alarms:												

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	**2004**	*$21,663,025*	*$44,319,930*	*$783,000*	*$66,765,955*
SPRINKLERED:	**2004**	*$4,194,263*	*$0*	*$0*	*$4,194,263*
UNSPRINKLERED:	**2004**	*$17,468,762*	*$44,319,930*	*$783,000*	*$62,571,692*
EARTHQUAKE:	**2004**	*$0*	*$0*	*$0*	*$0*
FLOOD:	**2004**	*$0*	*$0*	*$0*	*$0*

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	**2005**	**$23,463,645**	**$44,380,918**	**$783,000**	**$68,627,563**
SPRINKLERED:	**2005**	**$4,580,974**	**$0**	**$0**	**$4,580,974**
UNSPRINKLERED:	**2005**	**$18,882,671**	**$44,380,918**	**$783,000**	**$64,046,589**
EARTHQUAKE:	**2005**	**$0**	**$0**	**$0**	**$0**
FLOOD:	**2005**	**$0**	**$0**	**$0**	**$0**

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CITY OF BURBANK

Page 1

Includes B & M

Filter: Burbank Public Wrks

Real Property Trend Factor: 9.22%

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December 17, 2004

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36		PUBLIC WORKS	47,048 SQ. FT.	Class: C	No	1959	9/04	EQ: B2	No	No	No	*2004*	*$3,641,100*	*$1,270,300*	*$0*	*$4,911,400*
Your Location PUBLIC WRKS		PUBLIC WORKS ADMINISTRATION	MUNICIPAL VEHICLE SHOP	MASONRY CONST/WOOD ROOF				Flood: X	No	No	No	**2005**	**$3,849,833**	**$1,309,161**	**$0**	**$5,158,994**
ISO Code: 4		124 S. LAKE ST.	Pct. Spmkl: 0	Notes: C/O: SMALL ADMIN AREA, SIGNAL SHOP, CARPENTRY SHOP, PARTS WAREHOUSE, VEHICLE SVC & HVY REPAIR SHOPS, TIRE SHOP; 24-BAYS TOTAL (18 S. SIDE, 6 N. SIDE)				Rent Notes:								
		BURBANK CA 91502														
		Stories: 1		Alarms: FIRE ALARM												
89		WATER RCLAMATION PLANT	1,868 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	*2004*	*$362,280*	*$148,462*	*$0*	*$510,742*
Your Location PUBLIC WRKS		CHESTNUT ST/LAKE ST	CONTROL HOUSE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$395,682**	**$154,534**	**$0**	**$550,216**
		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
90		WATER RECLAMATION PLANT	672 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	*2004*	*$92,963*	*$71,264*	*$0*	*$164,227*
Your Location PUBLIC WRKS		CHESTNUT ST/LAKE ST	CHEMICAL BLDG	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$101,534**	**$74,179**	**$0**	**$175,713**
		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
91		WATER RECLAMATION PLANT	418 SQ. FT.	Class: B	No	0	0	EQ: B2	No	No	No	*2004*	*$57,418*	*$279,109*	*$0*	*$336,527*
Your Location PUBLIC WRKS		CHESTNUT ST/LAKE ST	FILTER PUMP	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$62,712**	**$290,525**	**$0**	**$353,237**
		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
92		WATER RECLAMATION PLANT	458 SQ. FT.	Class: B	No	0	0	EQ: B2	No	No	No	*2004*	*$43,749*	*$71,264*	*$0*	*$115,013*
Your Location PUBLIC WRKS		CHESTNUT ST/LAKE ST	RETURN SLUDGE PUMP HOUSE	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$47,783**	**$74,179**	**$0**	**$121,962**
		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
93		WATER RECLAMATION PLANT	1,997 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	*2004*	*$307,597*	*$249,415*	*$0*	*$557,012*
Your Location PUBLIC WRKS		CHESTNUT ST/LAKE ST	BLOWER HOUSE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$335,957**	**$259,616**	**$0**	**$595,573**
		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
94		WATER RECLAMATION PLANT	1,875 SQ. FT.	Class: B	No	0	0	EQ: B2	No	No	No	*2004*	*$411,499*	*$296,922*	*$0*	*$708,421*
Your Location		CHESTNUT ST/LAKE ST	PUMP HOUSE	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$449,439**	**$309,066**	**$0**	**$758,505**

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Page 2

Includes B & M
Filter: Burbank Public Wrks
Real Property Trend Factor: 9.22%
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December 17, 2004

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95		WATER RECLAMATION PLANT	59,652 SQ. FT.	Class: B	No	0	0	EQ: B2	No	No	No	*2004*	*$3,324,790*	*$939,465*	*$0*	*$4,264,255*
Your Location		CHESTNUT ST/LAKE ST	WATER TREATMENT TANKS	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$3,631,336**	**$977,889**	**$0**	**$4,609,225**
PUBLIC WRKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
96		WATER RECLAMATION PLANT	2,888 SQ. FT.	Class: B	No	1966	0	EQ: B2	No	No	No	*2004*	*$157,216*	*$106,892*	*$0*	*$264,108*
Your Location		CHESTNUT & LAKE STREET	CHLORINE TANK/1 STORY	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$171,711**	**$111,264**	**$0**	**$282,975**
PUBLIC WRKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
97		WATER RELCAMATION PLANT	7,000 SQ. FT.	Class: B	No	1976	0	EQ: B2	No	No	No	*2004*	*$478,485*	*$17,816*	*$0*	*$496,301*
Your Location		CHESTNUT & LAKE STREET	TANK/1 STORY BELOW	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$522,601**	**$18,545**	**$0**	**$541,146**
PUBLIC WRKS		BURBANK CA 91506	GROUND BASEMENT	Notes:				Rent Notes:								
				Alarms:												
98		WATER RECLAMATION PLANT	0 SQ. FT.	Class: A	No	1966	0	EQ: B2	No	No	No	*2004*	*$60,154*	*$124,707*	*$0*	*$184,861*
Your Location		CHESTNUT & LAKE STREET	FILTERS W/ SPLITTER BOX	NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$65,700**	**$129,808**	**$0**	**$195,508**
PUBLIC WRKS		BURBANK CA 91506	26 FT. DIAMETER EACH	Notes:				Rent Notes:								
				Alarms:												
149		BURBANK RECYCLE CENTER	35,038 SQ. FT.	Class: A	No	1992	0	EQ: B2	No	No	No	*2004*	*$4,205,493*	*$324,034*	*$0*	*$4,529,527*
Your Location		500 S. FLOWER STREET	RECYCLE CENTER	NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$4,593,239**	**$337,287**	**$0**	**$4,930,526**
PUBLIC WRKS		BURBANK CA 91502	WAREHOUSE	Notes:				Rent Notes:								
				Alarms:												
149	B	BURBANK RECYCLE CENTER	203 SQ. FT.	Class: CB	No	1992	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		500 S. FLOWER STREET	RECYCLE CENTER	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PUBLIC WRKS		BURBANK CA 91502	SCALE HOUSE	Notes:				Rent Notes:								
				Alarms:												
149	C	BURBANK RECYCLE CENTER	6,825 SQ. FT.	Class: CB	No	1992	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		500 S. FLOWER STREET	RECYCLE CENTER	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PUBLIC WRKS		BURBANK CA 91502	ADMIN OFFICE	Notes:				Rent Notes:								
				Alarms:												
149	D	BURBANK RECYCLE CENTER	2,523 SQ. FT.	Class: CB	No	1992	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		500 S. FLOWER STREET	RECYCLE CENTER	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PUBLIC WRKS		BURBANK CA 91502	EMPLOYEE BLDG	Notes:				Rent Notes:								
				Alarms:												

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December 17, 2004

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168		WATER RECLAMATION PLANT	3,800 SQ. FT.	Class: U	No	1938	0	EQ: B2	No	No	No	*2004*	*$923,126*	*$47,742*	*$0*	*$970,868*
Your Location		724-728 N. LAKE	PLANT EXPANSION	UNKNOWN				Flood:	No	No	No	**2005**	**$1,008,238**	**$49,695**	**$0**	**$1,057,933**
PUBLIC WRKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
169		WATER RECLAMATION PLANT	2,500 SQ. FT.	Class: U	No	1956	0	EQ: B2	No	No	No	*2004*	*$438,573*	*$324,034*	*$0*	*$762,607*
Your Location		732 N. LAKE	PLANT EXPANSION	UNKNOWN				Flood:	No	No	No	**2005**	**$479,009**	**$337,287**	**$0**	**$816,296**
PUBLIC WRKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
170		WATER RECLAMATION PLANT	9,492 SQ. FT.	Class: U	No	1967	0	EQ: B2	No	No	No	*2004*	*$913,193*	*$0*	*$0*	*$913,193*
Your Location		740-760 N. LAKE	PLANT EXPANSION	UNKNOWN				Flood:	No	No	No	**2005**	**$997,389**	**$0**	**$0**	**$997,389**
PUBLIC WRKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
171		WATER RECLAMATION PLANT	4,050 SQ. FT.	Class: U	No	1946	0	EQ: B2	No	No	No	*2004*	*$270,353*	*$0*	*$0*	*$270,353*
Your Location		800 N. LAKE	PLANT EXPANSION	UNKNOWN				Flood:	No	No	No	**2005**	**$295,280**	**$0**	**$0**	**$295,280**
PUBLIC WRKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
172		WATER RECLAMATION PLANT	12,422 SQ. FT.	Class: U	No	1982	0	EQ: B2	No	No	No	*2004*	*$1,201,569*	*$0*	*$0*	*$1,201,569*
Your Location		810-814 N. LAKE	PLANT EXPANSION	UNKNOWN				Flood:	No	No	No	**2005**	**$1,312,354**	**$0**	**$0**	**$1,312,354**
PUBLIC WRKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 4

Includes B & M

Filter: Burbank Public Wrks

Real Property Trend Factor: 9.22%

Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	**2004**	*$16,889,558*	*$4,271,426*	*$0*	*$21,160,984*
SPRINKLERED:	**2004**	*$0*	*$0*	*$0*	*$0*
UNSPRINKLERED:	**2004**	*$16,889,558*	*$4,271,426*	*$0*	*$21,160,984*
EARTHQUAKE:	**2004**	*$0*	*$0*	*$0*	*$0*
FLOOD:	**2004**	*$0*	*$0*	*$0*	*$0*

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	**2005**	**$18,319,797**	**$4,433,035**	**$0**	**$22,752,832**
SPRINKLERED:	**2005**	**$0**	**$0**	**$0**	**$0**
UNSPRINKLERED:	**2005**	**$18,319,797**	**$4,433,035**	**$0**	**$22,752,832**
EARTHQUAKE:	**2005**	**$0**	**$0**	**$0**	**$0**
FLOOD:	**2005**	**$0**	**$0**	**$0**	**$0**

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
42	E	POWER SUPPLY	0 SQ. FT.	Class: U	No	1941	0	EQ: B2	No	No	No	*2004*	*$0*	*$410,343*	*$0*	*$410,343*
Your Location BWP		BURBANK CA 91502	UTIL/MAGNOLIA CONTROL	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$427,126**	**$0**	**$427,126**
				Notes: Apparatus is on an open concrete slab/support, not a structure. COPE info not applicable.				Rent Notes:								
				Alarms:												
43		BWP- PRODUCTION PLANTS	0 SQ. FT.	Class: S	No	1959	9/04	EQ: B2	No	No	No	*2004*	*$38,416,000*	*$800,000*	*$0*	*$39,216,000*
Your Location BWP		OLIVE UNIT 1 STEAM PLANT	PACKAGED ELECT	ALL STEEL				Flood: X	No	No	No	**2005**	**$38,563,013**	**$2,234,717**	**$0**	**$40,797,730**
ISO Code: 3		120 S. LAKE ST.	GENERATOR PLANT	Notes: C/O: 50 MW ALLIS CHALMERS NAT. GAS GENERATOR W/STEAM TURBINE; SHARES SCR (EMISSIONS) PACKAGE W/OLIVE 2 ($15M IN 2003); SHARES CNTRL RM BETWEEN OLIVE 1&2; ENCLOSED BOILER SYST W/STL FRAME SUPPORTING OPERATOR PLATFORMS/CATWALKS (7-LEVEL); VARIOUS OVERHAULS/UPGRADES				Rent Notes:								
		BURBANK CA 91502														
		Stories: 7/2/1	Pct. Sprnkl: 0	Alarms: NONE												
43	A	BWP- PRODUCTION PLANTS	0 SQ. FT.	Class: S	No	1964	9/04	EQ: B2	No	No	No	*2004*	*$38,416,000*	*$800,000*	*$0*	*$39,216,000*
Your Location BWP		OLIVE UNIT 2 STEAM PLANT	PACKAGED ELECT	ALL STEEL				Flood: X	No	No	No	**2005**	**$38,547,787**	**$2,164,807**	**$0**	**$40,712,594**
ISO Code: 3		120 S. LAKE ST.	GENERATOR PLANT	Notes: C/O: 55 MW GE NAT. GAS GENERATOR W/STEAM TURBINE; SHARES SCR (EMISSIONS) PACKAGE W/OLIVE 1 ($15M IN 2003); SHARES CNTRL RM BETWEEN OLIVE 1&2; ENCLOSED BOILER SYST W/STL FRAME SUPPORTING OPERATOR PLATFORMS/CATWALKS (7-LEVEL); VARIOUS OVERHAULS/UPGRADES				Rent Notes:								
		BURBANK CA 91502														
		Stories: 7/2/1	Pct. Sprnkl: 0	Alarms: NONE												
43	B	BWP- PRODUCTION PLANTS	0 SQ. FT.	Class: S	No	1972	9/04	EQ: B2	No	No	No	*2004*	*$12,485,200*	*$260,000*	*$0*	*$12,745,200*
Your Location BWP		OLIVE UNIT 3 STEAM PLANT	PACKAGED ELECT	ALL STEEL				Flood: X	No	No	No	**2005**	**$12,485,200**	**$639,580**	**$0**	**$13,124,780**
			GENERATOR PLANT	Notes: PACKAGED ELECTRIC				Rent Notes:								

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CITY OF BURBANK

December 17, 2004

Page 2
Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
		120 S. LAKE ST. BURBANK CA 91502 Stories: NA	Pct. Sprnkl: 0	TURBINE GENERATOR (20MW PRATT WHITNEY JET ENGINE) INSIDE PRE-ENGINEERED STL ENCL; INCL: CNTRL RM BLDG (SWITCHGEAR HOUSING FOR OLIVE 3&4); STL FRAME AROUND BOILER SYST SUPPORTING OPERATOR PLATFORMS/CATWALKS; STL SMOKESTACK, GAS COMPRESSORS, PROCESS PIPING & ACCYS. OFFLINE; SCHED FOR REMOVAL END OF 2004 Alarms: NONE												
43	C	BWP- PRODUCTION PLANTS OLIVE UNIT 4 STEAM PLANT 120 S. LAKE ST. BURBANK CA 91502 Stories: NA	0 SQ. FT. PACKAGED ELECT GENERATOR PLANT Pct. Sprnkl: 0	Class: S ALL STEEL Notes: PACKAGED ELECTRIC GENERATION STATION C/O: GAS TURBINE GENERATOR (30MW PRATT WHITNEY JET ENGINE) INSIDE PRE-ENGINEERED STL ENCL; INCL CNTRL RM, STL FRAME AROUND BOILER SYST SUPPORTING OPERATOR PLATFORMS/CATWALKS, STL SMOKESTACK, TRANSFORMER, GAS COMPRESSORS, PROCESS PIPING & ACCYS. OFFLINE; SCHED FOR REMOVAL END OF 2004. Alarms: NONE	No	1973	9/04	EQ: B2 Flood: X Rent Notes:	No No	No No	No No	*2004* **2005**	*$18,727,800* **$18,727,800**	*$390,000* **$863,425**	*$0* **$0**	*$19,117,800* **$19,591,225**
Your Location BWP ISO Code: 3																
45		TRANS & DIST-VALLEY 3315 W. VICTORY BURBANK CA 91505	0 SQ. FT. UTIL/TRANSMISSION AND DISTRIBUTION STATIONS	Class: U UNKNOWN Notes: Apparatus is on an open concrete slab/support, not a structure. COPE info not applicable.	No	1959	0	EQ: B2 Flood: Rent Notes:	No No	No No	No No	*2004* **2005**	*$55,212* **$60,303**	*$4,411,424* **$4,591,851**	*$0* **$0**	*$4,466,636* **$4,652,154**
Your Location BWP																

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CITY OF BURBANK

December 17, 2004

Page 3

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
				Alarms:												
46		TRANS & DIST-CLYBOURN	0 SQ. FT.	Class: U	No	1977	0	EQ: B2	No	No	No	*2004*	*$15,154*	*$546,557*	*$0*	*$561,711*
Your Location		3150 CLYBOURN BLVD	UTIL/TRANSMISSION AND	UNKNOWN				Flood:	No	No	No	**2005**	**$16,551**	**$568,911**	**$0**	**$585,462**
BWP		BURBANK CA 91505	DISTRIBUTION STATIONS	Notes: Apparatus is on an open concrete slab/support, not a structure. COPE info not applicable.				Rent Notes:								
				Alarms:												
47		TRANS & DIST-NBC	0 SQ. FT.	Class: U	No	1956	0	EQ: B2	No	No	No	*2004*	*$15,609*	*$553,801*	*$0*	*$569,410*
Your Location		130 S. CALIF ST	UTIL/TRANSMISSION AND	UNKNOWN				Flood:	No	No	No	**2005**	**$17,048**	**$576,451**	**$0**	**$593,499**
BWP		BURBANK CA 91505	DISTRIBUTION STATIONS	Notes: Apparatus is on an open concrete slab/support, not a structure. COPE info not applicable.				Rent Notes:								
				Alarms:												
50		TRANS & DIST-TULARE	0 SQ. FT.	Class: U	No	1962	0	EQ: B2	No	No	No	*2004*	*$0*	*$400,828*	*$0*	*$400,828*
Your Location		3001 N HOLLYWOOD WAY	UTIL/TRANSMISSION AND	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$417,222**	**$0**	**$417,222**
BWP		BURBANK CA 91505	DISTRIBUTION STATIONS	Notes: Apparatus is on an open concrete slab/support, not a structure. COPE info not applicable.				Rent Notes:								
				Alarms:												
51		TRANS & DIST-WARNER	0 SQ. FT.	Class: U	No	1942	0	EQ: B2	No	No	No	*2004*	*$0*	*$762,167*	*$0*	*$762,167*
Your Location		4000 WARNER BLVD/STUDIOS	UTIL/TRANSMISSION AND	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$793,340**	**$0**	**$793,340**
BWP		BURBANK CA 91505	DISTRIBUTION STATIONS	Notes:				Rent Notes:								
				Alarms:												
54		BWP- ADMINISTRATION	33,000 SQ. FT.	Class: B	No	1949	9/04	EQ: B2	No	No	No	*2004*	*$4,589,500*	*$891,000*	*$0*	*$5,480,500*
Your Location		BWP ADMINISTRATION BLDG	OFFICE/ADMINISTRATION	ALL REINFORCED CONCRETE				Flood: X	No	No	No	**2005**	**$4,598,065**	**$891,790**	**$0**	**$5,489,855**
BWP		164 W. MAGNOLIA BLVD.		Notes: MARBLE WALL TREATMENTS;				Rent Notes:								
ISO Code: 6		BURBANK CA 91502	Pct. Sprnkl: 0	INT. OFFICE SPACE: REMODELED- $3M, DATA NTWK, CPU TRAINING RM, VIDEO PROJ & PC'S, BASIC SERVER RM, LARGE ENTRY ATRIUM, B/I; BSMT (GROUND): WHEEL-LIFT, MECH/STORAGE; SUB-BSMT: AUDITORIUM, MTG RM W/PLATFORM												
		Stories: 3														

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 4

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Alarms: FIRE ALARM - MANUAL, FIRE ALARM - AUTOMATIC

Loc #	2nd Id	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
55		GENERAL PLANT	12,240 SQ. FT.	Class: B	No	1963	0	EQ: B2	No	No	No	*2004*	*$517,813*	*$511,758*	*$0*	*$1,129,571*
Your Location			UTIL/ELECTRICAL REPAIR	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$674,775**	**$532,689**	**$0**	**$1,207,464**
BWP		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
56		911 S FLOWER	864 SQ. FT.	Class: B	No	1959	0	EQ: B2	No	No	No	*2004*	*$45,913*	*$2,433,086*	*$0*	*$2,478,999*
Your Location			FLOWER	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$50,146**	**$2,532,599**	**$0**	**$2,582,745**
BWP		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
57		MCCAMBRIDGE	972 SQ. FT.	Class: B	No	1956	0	EQ: B2	No	No	No	*2004*	*$50,158*	*$1,863,519*	*$0*	*$1,913,677*
Your Location		1520 SAN FERNANDO RD	MCCAMBRIDGE	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$54,783**	**$1,939,737**	**$0**	**$1,994,520**
BWP		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												
58		NAOMI	636 SQ. FT.	Class: B	No	1972	0	EQ: B2	No	No	No	*2004*	*$57,281*	*$1,660,409*	*$0*	*$1,717,690*
Your Location		228 S. NAOMI	NAOMI	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$62,562**	**$1,728,320**	**$0**	**$1,790,882**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
59		PACIFIC	636 SQ. FT.	Class: B	No	1962	0	EQ: B2	No	No	No	*2004*	*$34,248*	*$1,145,382*	*$0*	*$1,179,630*
Your Location		3120 PACIFIC AVE	PACIFIC	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$37,406**	**$1,192,228**	**$0**	**$1,229,634**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
60		TOWN	1,685 SQ. FT.	Class: B	No	1969	0	EQ: B2	No	No	No	*2004*	*$71,830*	*$1,795,341*	*$0*	*$1,867,171*
Your Location		39 E OLIVE AVE	TOWN	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$78,453**	**$1,868,770**	**$0**	**$1,947,223**
BWP		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
61		VICTORY	963 SQ. FT.	Class: B	No	1974	0	EQ: B2	No	No	No	*2004*	*$48,339*	*$1,881,987*	*$0*	*$1,930,326*
Your Location		3101 VICTORY BLVD.	VICTORY	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$52,796**	**$1,958,960**	**$0**	**$2,011,756**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 5

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
62		WINONA	928 SQ. FT.	Class: B	No	1944	0	EQ: B2	No	No	No	*2004*	*$43,643*	*$2,272,585*	*$0*	*$2,316,228*
Your Location		3020 WINONA AVENUE	WINONA	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$47,667**	**$2,365,534**	**$0**	**$2,413,201**
BWP		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												
63		ALAMEDA	800 SQ. FT.	Class: B	No	1951	0	EQ: B2	No	No	No	*2004*	*$44,854*	*$2,631,939*	*$0*	*$2,676,793*
Your Location		3600 W ALAMEDA	ALAMEDA	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$48,990**	**$2,739,585**	**$0**	**$2,788,575**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
64		VEGA	61 SQ. FT.	Class: B	No	1941	0	EQ: B2	No	No	No	*2004*	*$9,396*	*$805,916*	*$0*	*$815,312*
Your Location		3611 EMPIRE/LOCKHEED	VEGA	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$10,262**	**$838,878**	**$0**	**$849,140**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
67		LINCOLN (MAIN)	0 SQ. FT.	Class: B	No	1972	0	EQ: B2	No	No	No	*2004*	*$46,219*	*$4,048,042*	*$0*	*$4,094,261*
Your Location		1820 N LINCOLN ST	LINCOLN (MAIN)	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$50,480**	**$4,213,607**	**$0**	**$4,264,087**
BWP		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
71		BWP- OLIVE STEAM PLANT	6,440 SQ. FT.	Class: C	No	1959	9/04	EQ: B2	No	No	No	*2004*	*$978,940*	*$393,400*	*$0*	*$1,372,340*
Your Location		POWERPLANT	SHOP BUILDING	MASONRY CONST/WOOD ROOF				Flood: X	No	No	No	**2005**	**$1,006,646**	**$394,928**	**$0**	**$1,401,574**
BWP		ADMINISTRATION BLDG	OFFICE & SHOP	Notes: C/O: 2-STY SECTION (STL				Rent Notes:								
ISO Code: 4		120 S. LAKE ST.	Pct. Sprnkl: 0	FRAME FLR/ROOF STRUCTURE												
		BURBANK CA 91502		W/CONC BLOCK WALLS); 1ST FLR:												
		Stories: 2		ELECT SHOP, MACHINE SHOP, MNTC												
				SHOP, WELDING; 2ND FLR: OFFICES &												
				RR'S; 1-STY MNTC SHOP SECTION												
				W/CONC WALLS & RETRACTABLE												
				CONC PLANK ROOF; ROOFTOP BRIDGE												
				CRANE W/TRACKS TO SVC												
				GENERATORS												
				Alarms: INTRUSION SYSTEM												
109		SAN JOSE	0 SQ. FT.	Class: A	No	1982	0	EQ: B2	No	No	No	*2004*	*$56,475*	*$1,620,171*	*$0*	*$1,676,646*
Your Location		522 N THIRD ST	UTIL/ELECTRIC DISTRIBUTION	NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$61,682**	**$1,686,436**	**$0**	**$1,748,118**
BWP		BURBANK CA 91502	STATION	Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Page 6

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
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December 17, 2004

Loc #	2nd Id	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
112		INDUSTRIAL BUILDING	3,000 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	*2004*	*$332,205*	*$0*	*$0*	*$332,205*
Your Location		2547 ONTARIO	UTIL/FUTURE DISTRIBUTION	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$362,834**	**$0**	**$0**	**$362,834**
BWP		BURBANK CA 91504	STATION SITE	Notes:				Rent Notes:								
				Alarms:												
113		PRIVATE DWELLING	900 SQ. FT.	Class: D	No	0	0	EQ: B2	No	No	No	*2004*	*$80,659*	*$0*	*$0*	*$80,659*
Your Location		2547 ONTARIO	UTIL/FUTURE DISTRIBUTION	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$88,096**	**$0**	**$0**	**$88,096**
BWP		BURBANK CA 91504	STATION SITE	Notes:				Rent Notes:								
				Alarms:												
114		BEACHWOOD PUMP STATION	1,500 SQ. FT.	Class: A	No	1976	0	EQ: B2	No	No	No	*2004*	*$105,268*	*$79,576*	*$0*	*$184,844*
Your Location		1419 RIVERSIDE DRIVE		NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$114,974**	**$82,831**	**$0**	**$197,805**
BWP		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
124		SCADA CENTER	5,000 SQ. FT.	Class: B	Yes	1988	0	EQ: B2	No	No	No	*2004*	*$1,025,324*	*$712,615*	*$0*	*$1,737,939*
Your Location		1811 NORTH ONTARIO	SCADA CENTER	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$1,119,859**	**$741,761**	**$0**	**$1,861,620**
BWP		BURBANK CA 91505	Public Services Dept.	Notes:				Rent Notes:								
				Alarms:												
148			5,289 SQ. FT.	Class: CB	No	0	0	EQ: B2	No	No	No	*2004*	*$525,881*	*$0*	*$0*	*$525,881*
Your Location		1048 N. LAKE	INDUSTRIAL BLDG	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$574,367**	**$0**	**$0**	**$574,367**
BWP		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
173		KEYSTONE DISTRIBUTION	0 SQ. FT.	Class: A	No	0	0	EQ: B2	No	No	No	*2004*	*$2,006,757*	*$2,673,549*	*$0*	*$4,680,306*
Your Location		ST.	UTIL/ELECTRICAL	NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$2,191,780**	**$2,782,897**	**$0**	**$4,974,677**
BWP		ALAMEDA & KEYSTONE STS.	SUBSTATION	Notes: includes all structures at this				Rent Notes:								
		BURBANK CA 91502		location												
				Alarms:												
179		GOLDEN STATE ELEC. DIST.	45,000 SQ. FT.	Class: S	No	1985		EQ: B2	No	No	No	*2004*	*$3,476,249*	*$0*	*$0*	*$3,476,249*
Your Location		2201 W. PACIFIC		ALL STEEL				Flood:	No	No	No	**2005**	**$3,796,759**	**$0**	**$0**	**$3,796,759**
BWP		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
180		HOLLYWOOD WAY STATION	35,000 SQ. FT.	Class: B	No	1986		EQ: B2	No	No	No	*2004*	*$3,476,249*	*$0*	*$0*	*$3,476,249*
Your Location		3600 W. ALAMEDA		ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$3,796,759**	**$0**	**$0**	**$3,796,759**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 7

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
181		REPEATER STATION	100 SQ. FT.	Class: U	No			EQ: B2	No	No	No	*2004*	*$579,375*	*$0*	*$0*	*$579,375*
Your Location		DISNEY BLDG. - W. ALAMEDA		UNKNOWN				Flood:	No	No	No	**2005**	**$632,793**	**$0**	**$0**	**$632,793**
BWP		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
182		PALM PUMP PLANT	0 SQ. FT.	Class: CB	No	1949		EQ: B2	No	No	No	*2004*	*$579,375*	*$0*	*$0*	*$579,375*
Your Location		2030 HOLLYWOOD WAY		CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$632,793**	**$0**	**$0**	**$632,793**
BWP		BURBANK CA 91505	RENOVATED 1998	Notes:				Rent Notes:								
				Alarms:												
183		RES. #3	1,000 SQ. FT.	Class: CB	No			EQ:	No	No	No	*2004*	*$115,875*	*$0*	*$0*	*$115,875*
Your Location		300 N. SUNSET CANYON		CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$126,559**	**$0**	**$0**	**$126,559**
BWP		BURBANK CA		Notes:				Rent Notes:								
				Alarms:												
211		WATER TREATMENT PLANT	91,120 SQ. FT.	Class: S	No	1995	9/04	EQ: B2	No	No	No	*2004*	*$25,930,800*	*$540,000*	*$0*	*$26,470,800*
Your Location		WATER TREATMENT PLANT	WATER - TREATMENT PLANT	ALL STEEL				Flood: X	No	No	No	**2005**	**$27,810,574**	**$540,000**	**$0**	**$28,350,574**
BWP		3200 MONTEREY AVE.		Notes: 12.7 MGD WATER TREATMENT				Rent Notes:								
ISO Code: 3		BURBANK CA 91506	Pct. Sprnkl: 0	PLANT C/O: LIQUID PHASE ACTIVE												
		Stories: NA		CARBON TANKS, PUMPS, PROCESS												
				PIPE, VALVES, ACCYS; BOOSTER												
				STATION, BLEND STATION, 5 MG												
				WATER TANK , DISSINFECTION												
				STATION, BOILER BLDG &												
				CONTROL/MNTC BLDG; SUPERFUND												
				SITE, OVERALL $200M PROJ INCL WELL												
				FIELD												
				Alarms: NOT APPLICABLE												
212	A	BWP- LAKE ONE STEAM	0 SQ. FT.	Class: S	No	2002	9/04	EQ: B2	No	No	No	*2004*	*$41,297,200*	*$860,000*	*$0*	*$42,157,200*
Your Location		PLANT	PACKAGE ELECT	ALL STEEL				Flood: X	No	No	No	**2005**	**$41,297,200**	**$860,000**	**$0**	**$42,157,200**
BWP		LAKE ONE STEAM PLANT	GENERATOR PLANT	Notes: C/O: SGL PACKAGE 50 MW NAT.				Rent Notes:								
ISO Code: 3		164 W. MAGNOLIA		GAS GENERATOR (GE LM 6000 W/747												
		BURBANK CA 91502	Pct. Sprnkl: 0	JET ENGINE, SCR (EMISSIONS)												
		Stories: NA		PACKAGE W/STL SMOKESTACK (10' DIA												
				X 100 FT HGT); INCL BALANCE OF												
				PLANT, PROCESS PIPE, GAS												
				COMPRESSORS, BREAKERS,												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 8

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
				SWITCHGEAR & TRANSFORMERS (LOCATED ELSEWHERE IN YARD); APPROX $40M ORIG. PROJ. COST. Alarms: NONE												
213		BWP- SWITCHING STATION	1,833 SQ. FT.	Class: S	No	2002	9/04	EQ: B2	No	No	No	*2004*	*$9,604,000*	*$800,000*	*$0*	*$10,404,000*
Your Location BWP		CAPON SWITCHING STATION	ELECTRICAL SWITCHING	ALL STEEL				Flood: X	No	No	No	**2005**	**$10,479,900**	**$800,000**	**$0**	**$11,279,900**
ISO Code: 3		3900 W. VERDUGO AVE.	STATION	Notes: CNTRL HOUSE (SWITCHING				Rent Notes:								
		CAPON SWITCHING STATION		PNLS/CAPACITORS) & OUTDOOR												
		BURBANK CA 91505	Pct. Sprnkl: 0	EQUIP C/O: PAD-MTD TRANSORMERS												
		Stories: 1		W/OIL CONTAINMENT SYST												
				(1@120MVA, 1@134MVA), NEUTRAL												
				REACTORS (2@69KV), CAPACITOR												
				BANKS IN WEATHER-TIGHT ENCL												
				(2@34.5KV), BREAKERS 8@												
				72.5KV/2500A; CMU PERIMETER WALL.												
				1ST SWITCHING STA ON W. COAST												
				USING GIS TECH												
				Alarms: INTRUSION SYSTEM												
214		DWELLING	925 SQ. FT.	Class: D	No			EQ:	No	No	No	*2004*	*$352,000*	*$0*	*$0*	*$352,000*
Your Location BWP		SINGLE-FAMILY HOUSE	HOUSE	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$384,454**	**$0**	**$0**	**$384,454**
		461 N. VARNEY STREET		Notes: Building will be demolished in June				Rent Notes:								
		BURBANK CA		2003												
				Alarms:												
217		REFRIGERATION FACILITY	66,000 SQ. FT.	Class: B	No	1946		EQ:	No	No	No	*2004*	*$3,800,000*	*$0*	*$0*	*$3,800,000*
Your Location BWP		REFRIGERATION FACILITY		ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$4,150,360**	**$0**	**$0**	**$4,150,360**
		10 WEST MAGNOLIA		Notes: Ownership is 75% city and 25%				Rent Notes:								
		BURBANK CA		agency												
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Page 9

Includes B & M
Filter: Burbank BWP
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

December 17, 2004

Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$208,112,801	$38,955,395	$0	$247,068,196
SPRINKLERED:	2004	$1,025,324	$712,615	$0	$1,737,939
UNSPRINKLERED:	2004	$207,087,477	$38,242,780	$0	$245,330,257
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$212,812,476	$43,968,980	$0	$256,781,456
SPRINKLERED:	2005	$1,119,859	$741,761	$0	$1,861,620
UNSPRINKLERED:	2005	$211,692,617	$43,227,219	$0	$254,919,836
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

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CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank Comm Devlp
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
9		BOYS AND GIRLS CLUB	3,842 SQ. FT.	Class: A	No	1957	0	EQ: B2	No	No	No	*2004*	*$475,753*	*$112,831*	*$0*	*$588,584*
Your Location		BOYS AND GIRLS CLUB		NON COMB STEEL FRAME				Flood:	No	No	No	**2005**	**$519,617**	**$117,446**	**$0**	**$637,063**
COMM DEVLP		2244 N. BUENA VISTA ST.		Notes:				Rent Notes:								
		BURBANK CA 91504		Alarms:												
150		VACANT	18,280 SQ. FT.	Class: D	No	0	0	EQ: B2	No	No	No	*2004*	*$1,390,856*	*$0*	*$0*	*$1,390,856*
Your Location		3516 W. ALAMEDA	14 UNITS (3 BLDGS.,	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$1,476,160**	**$0**	**$0**	**$1,476,160**
COMM DEVLP		BURBANK CA 91502	1 STORY)	Notes:				Rent Notes:								
				Alarms:												
151		VACANT	7,500 SQ. FT.	Class: D	No	0	0	EQ: B2	No	No	No	*2004*	*$233,664*	*$0*	*$0*	*$233,664*
Your Location		3510 W. ALAMEDA		ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$251,944**	**$0**	**$0**	**$251,944**
COMM DEVLP		BURBANK CA 91502		Notes: Improved with 3 unit apartment bldg., total of 2025 sq ft. Constructed in 1941. Improved with 3 parking garages measuring 540 sq ft.				Rent Notes:								
				Alarms:												
184		CDD	8,280 SQ. FT.	Class: C	Yes	1978		EQ: B2	No	No	No	*2004*	*$1,738,124*	*$0*	*$0*	*$1,738,124*
Your Location		141 NO. GLENOAKS BLVD.	OFFICES	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$1,898,379**	**$0**	**$0**	**$1,898,379**
COMM DEVLP		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
208		OVROM PARK-VACANT	10,231 SQ. FT.	Class: D	No	1937		EQ: B2	No	No	No	*2004*	*$385,005*	*$0*	*$0*	*$385,005*
Your Location		115-123 EAST CEDAR AVENUE		ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$420,502**	**$0**	**$0**	**$420,502**
COMM DEVLP		BURBANK CA 91502		Notes: Sq. Ft breakdown: lot @ 7,365 and bldgs @ 2,866				Rent Notes:								
				Alarms:												
209		OVROM PARK- VACANT	7,120 SQ. FT.	Class: CB	No	1975		EQ:	No	No	No	*2004*	*$904,972*	*$0*	*$0*	*$904,972*
Your Location		140 E. PROVIDENCIA		CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$988,410**	**$0**	**$0**	**$988,410**
COMM DEVLP		BURBANK CA		Notes: Lot is 8,250 sf., industrial bldg @6,000 sq. ft., and office mezzanine @ 1,120 sq. ft. The building is currently vacant.				Rent Notes:								
				Alarms:												

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CITY OF BURBANK

December 17, 2004

Page 2

Includes B & M

Filter: Burbank Comm Devlp

Real Property Trend Factor: 9.22%

Personal Property Trend Factor: 4.09%

Loc #	2nd Id	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
210		OVROM PARK-VACANT	8,250 SQ. FT.	Class:	No			EQ:	No	No	No	2004	$0	$0	$0	$0
Your Location		144 E. PROVIDENCIA		UNKNOWN				Flood:	No	No	No	2005	$0	$0	$0	$0
COMM DEVLP		BURBANK CA		Notes: vacant with chain-link fence accross the front of the site. Value included in loc # 209				Rent Notes:								
				Alarms:												
219		SINGLE FAMILY HOME	700 SQ. FT.	Class: D	No	1950		EQ:	No	No	No	2004	$0	$0	$0	$0
Your Location		3108 WINONA AVE		ALL COMB (WOOD FRAME)				Flood:	No	No	No	2005	$0	$0	$0	$0
COMM DEVLP		BURBANK CA		Notes:				Rent Notes:								
				Alarms:												

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$5,128,374	$112,831	$0	$5,241,205
SPRINKLERED:	2004	$1,738,124	$0	$0	$1,738,124
UNSPRINKLERED:	2004	$3,390,250	$112,831	$0	$3,503,081
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$5,555,012	$117,446	$0	$5,672,458
SPRINKLERED:	2005	$1,898,379	$0	$0	$1,898,379
UNSPRINKLERED:	2005	$3,656,633	$117,446	$0	$3,774,079
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

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CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank Library
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Loc #	2nd Id	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
14		CENTRAL LIBRARY	43,760 SQ. FT.	Class: B	No	1963	9/04	EQ: B2	No	No	No	*2004*	*$7,721,500*	*$3,375,200*	*$0*	*$11,096,700*
Your Location		CENTRAL LIBRARY	LIBRARY - HIGH END	ALL REINFORCED CONCRETE				Flood: X	No	No	No	**2005**	**$8,333,709**	**$3,499,993**	**$0**	**$11,833,702**
LIBRARY		110 N. GLENOAKS BLVD.		Notes: EMERGENCY LIGHTING, CCTV				Rent Notes:								
ISO Code: 6		BURBANK CA 91502	Pct. Spmkl: 0	SECURITY CAMERAS; 1ST FLR:												
		Stories: 2		LIBRARY; 2ND FLR: CHILDREN'S												
				LIBRARY & OFFICES; APPROX. 250,000												
				VOLUMES												
				Alarms: FIRE ALARM - AUTOMATIC, INTRUSION SYSTEM												
15		BUENA VISTA LIBRARY	28,200 SQ. FT.	Class: A	Yes	2001	9/04	EQ: B2	No	No	No	*2004*	*$6,671,900*	*$1,564,000*	*$0*	*$8,235,900*
Your Location		BUENA VISTA LIBRARY	LIBRARY - HIGH END	NON COMB STEEL FRAME				Flood: X	No	No	No	**2005**	**$7,558,054**	**$1,578,816**	**$0**	**$9,136,870**
LIBRARY		300 N. BUENA VISTA		Notes: C/O: ATRIUM, CIRCULATION				Rent Notes:								
ISO Code: 5		BURBANK CA 91505	Pct. Spmkl: 100	AREA W/BUILT-IN DESK, READING												
		Stories: 1		STACKS, CHILDREN'S LIBRARY,												
				WORKROOM, & OFFICES; 20												
				REMOVABLE BOOKSHELVES; INSET												
				DECORATIVE CLNG W/DEC WD BMS;												
				APPROX. 100,000 VOLUMES												
				Alarms: SPRINKLER SYSTEM, INTRUSION SYSTEM, FIRE ALARM - MANUAL,												
				FIRE ALARM - AUTOMATIC												
16		LIBRARY	6,512 SQ. FT.	Class: C	No	1972	0	EQ: B2	No	No	No	*2004*	*$773,779*	*$475,078*	*$0*	*$1,248,857*
Your Location		3323 W. VICTORY BLVD.	NORTHWEST LIBRARY	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$845,121**	**$494,509**	**$0**	**$1,339,630**
LIBRARY		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Includes B & M

Filter: Burbank Library

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December 17, 2004

Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$15,167,179	$5,414,278	$0	$20,581,457
SPRINKLERED:	2004	$6,671,900	$1,564,000	$0	$8,235,900
UNSPRINKLERED:	2004	$8,495,279	$3,850,278	$0	$12,345,557
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$16,736,884	$5,573,318	$0	$22,310,202
SPRINKLERED:	2005	$7,558,054	$1,578,816	$0	$9,136,870
UNSPRINKLERED:	2005	$9,178,830	$3,994,502	$0	$13,173,332
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank Parks
Real Property Trend Factor: 9.22%
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Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Sprklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents	Year	Real Property	Personal Property	BI / Rents	Totals
4		PARK STRUCTURE	35,514 SQ. FT.	Class: B	Yes	1994	0	EQ: B2	No	No	No	*2004*	*$1,342,494*	*$0*	*$0*	*$1,342,494*
Your Location		3RD ST. & ANGELENO	PARK STRUCTURE	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$1,466,272**	**$0**	**$0**	**$1,466,272**
PARKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
7	A	PARK/STORAGE	2,210 SQ. FT.	Class: C	No	1979	0	EQ: B2	No	No	No	*2004*	*$90,227*	*$106,892*	*$0*	*$197,119*
Your Location		353 E. OLIVE AVE.	PARK/STORAGE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$98,546**	**$111,264**	**$0**	**$209,810**
PARKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
17		JOSLYN CENTER	14,589 SQ. FT.	Class: D	No	1972	0	EQ: B2	No	No	No	*2004*	*$2,205,132*	*$251,791*	*$0*	*$2,456,923*
Your Location		1301 W. OLIVE AVE.	JOSLYN CENTER	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$2,408,445**	**$262,089**	**$0**	**$2,670,534**
PARKS		BURBANK CA 91506	OLIVE AVE. PARK	Notes:				Rent Notes:								
				Alarms:												
19		RECREATION BLDG.	19,305 SQ. FT.	Class: B	No	1957	0	EQ: B2	No	No	No	*2004*	*$1,829,180*	*$58,198*	*$0*	*$1,887,378*
Your Location		1111 W. OLIVE AVE.	RECREATION BLDG.	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$1,997,830**	**$60,578**	**$0**	**$2,058,408**
PARKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
19	A	LITTLE THEATER	4,011 SQ. FT.	Class: D	No	1952	0	EQ: B2	No	No	No	*2004*	*$276,152*	*$7,126*	*$0*	*$283,278*
Your Location		1111 W. OLIVE AVE.	LITTLE THEATER	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$301,613**	**$7,417**	**$0**	**$309,030**
PARKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
20	B	MCCAMBRIDGE PARK	38,895 SQ. FT.	Class: C	No	1957	9/04	EQ: B2	No	No	No	*2004*	*$4,778,000*	*$329,000*	*$0*	*$5,107,000*
Your Location		RECREATION CENTER	RECREATION CENTER	MASONRY CONST/WOOD ROOF				Flood: X	No	No	No	**2005**	**$5,134,712**	**$338,375**	**$0**	**$5,473,087**
PARKS		1515 N. GLENN OAKS	GYM & POOL	Notes: C/O: GYM W/6 BBALL GOALS,				Rent Notes:								
ISO Code: 4		BURBANK CA 91504	Pct. Sprnkl: 0	KITCHEN W/EQUIP., SMALL STAGE,												
		Stories: 1		DAYLIGHT BSMNT, B+G LOCKER RMS &												
				OUTDOOR OLYMPIC SIZE POOL W/												
				PUMP RM BELOW												
				Alarms: NONE												
21		VALLEY PARK	572 SQ. FT.	Class: C	No	1959	0	EQ: B2	No	No	No	*2004*	*$58,787*	*$592*	*$0*	*$59,379*
Your Location		VALLEY PARK & ALLAN ST	RESTROOMS	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$64,207**	**$616**	**$0**	**$64,823**
PARKS		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 2

Includes B & M
Filter: Burbank Parks
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Sprklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	Bl / Rents	Year	Real Property	Personal Property	Bl / Rents	Totals
21	A	VALLEY PARK	30 SQ. FT.	Class: S	No	1978	0	EQ: B2	No	No	No	*2004*	*$2,735*	*$1,780*	*$0*	*$4,515*
Your Location PARKS		VALLEY ST.& CLYBURN AVE BURBANK CA 91505	STORAGE	ALL STEEL Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$2,987**	**$1,853**	**$0**	**$4,840**
22	A	PACIFIC PARK	1,280 SQ. FT.	Class: C	No	1991	0	EQ: B2	No	No	No	*2004*	*$51,951*	*$2,376*	*$0*	*$54,327*
Your Location PARKS		PACIFIC AV & SCREENLAND BURBANK CA 91505	RESTROOM/KITCHEN AND OPEN SPACE	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$56,741**	**$2,473**	**$0**	**$59,214**
23		VICROY PARK	612 SQ. FT.	Class: C	No	1955	0	EQ: B2	No	No	No	*2004*	*$71,090*	*$1,189*	*$0*	*$72,279*
Your Location PARKS		MONTEREY AV & BRIGHTON BURBANK CA 91506	RESTROOM	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$77,644**	**$1,238**	**$0**	**$78,882**
24		JOHNNY CARSON PARK	1,356 SQ. FT.	Class: C	No	1959	0	EQ: B2	No	No	No	*2004*	*$147,648*	*$1,780*	*$0*	*$149,428*
Your Location PARKS		RIVERSIDE FRWY/CATALINA BURBANK CA 91505	RESTROOM/STORAGE	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$161,261**	**$1,853**	**$0**	**$163,114**
25		MOUNTAIN VIEW PARK	655 SQ. FT.	Class: C	No	1960	0	EQ: B2	No	No	No	*2004*	*$69,724*	*$3,564*	*$0*	*$73,288*
Your Location PARKS		RIVERSIDE DR & BEACHWOOD BURBANK CA 91506	RESTROOM/OFFICE	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$76,153**	**$3,710**	**$0**	**$79,863**
25	A	MOUNTAIN VIEW PARK	161 SQ. FT.	Class: C	No	1957	0	EQ: B2	No	No	No	*2004*	*$36,911*	*$106,941*	*$0*	*$143,852*
Your Location PARKS		RIVERSIDE & BEACHWOOD BURBANK CA 91506	CONTROL BUILDING FOR PUMP STATION	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$40,314**	**$111,315**	**$0**	**$151,629**
26		VERDUGO PARK	765 SQ. FT.	Class: D	No	1956	0	EQ: B2	No	No	No	*2004*	*$50,584*	*$2,376*	*$0*	*$52,960*
Your Location PARKS		CALIF. ST.& VERDUGO AV. BURBANK CA 91506	YOUTH ACTIVITY CABIN	ALL COMB (WOOD FRAME) Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$55,248**	**$2,473**	**$0**	**$57,721**
26	A	VERDUGO PARK	2,205 SQ. FT.	Class: C	No	1948	0	EQ: B2	No	No	No	*2004*	*$216,002*	*$4,752*	*$0*	*$220,754*
Your Location PARKS		CALIF. ST.& VERDUGO AVE BURBANK CA 91506	ASSEMBLY BLDG.	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$235,917**	**$4,946**	**$0**	**$240,863**

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 3

Includes B & M
Filter: Burbank Parks
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

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26	B	VERDUGO PARK	16,229 SQ. FT.	Class: C	No	1948	0	EQ: B2	No	No	No	*2004*	*$1,913,941*	*$34,444*	*$0*	*$1,948,385*
Your Location		CALIF. ST.& VERDUGO AVE	REC. CENTER,	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$2,090,406**	**$35,853**	**$0**	**$2,126,259**
PARKS		BURBANK CA 91506	GYM & POOL	Notes:				Rent Notes:								
				Alarms:												
27		STARLITE BOWL	4,690 SQ. FT.	Class: CB	No	0	0	EQ: B2	No	No	No	*2004*	*$615,196*	*$22,566*	*$0*	*$637,762*
Your Location		1249 LOCKHEED VIEW DR.		CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$671,917**	**$23,489**	**$0**	**$695,406**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
27	A	STARLITE BOWL	1,325 SQ. FT.	Class: S	No	1960	0	EQ: B2	No	No	No	*2004*	*$131,243*	*$0*	*$0*	*$131,243*
Your Location		1249 LOCKHEED VIEW DR.	COTTAGE/RESTROOM	ALL STEEL				Flood:	No	No	No	**2005**	**$143,344**	**$0**	**$0**	**$143,344**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
27	B	STARLITE BOWL	384 SQ. FT.	Class: D	No	1975	0	EQ: B2	No	No	No	*2004*	*$71,089*	*$2,376*	*$0*	*$73,465*
Your Location		1249 LOCKHEED VIEW DR.	CONCESSION BLDG.	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$77,643**	**$2,473**	**$0**	**$80,116**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
27	C	STARLITE BOWL	52 SQ. FT.	Class: D	No	1975	0	EQ: B2	No	No	No	*2004*	*$3,245*	*$9,118*	*$0*	*$12,363*
Your Location		1249 LOCKHEED VIEW DR.	LIGHTHOUSE	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$3,544**	**$9,491**	**$0**	**$13,035**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
27	D	STARLITE BOWL	118 SQ. FT.	Class: D	No	1978	0	EQ: B2	No	No	No	*2004*	*$13,672*	*$0*	*$0*	*$13,672*
Your Location		1249 LOCKHEED VIEW DR.	TICKET BOOTH	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$14,933**	**$0**	**$0**	**$14,933**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
28		STARTER CLUBHOUSE	10,285 SQ. FT.	Class: D	No	1972	0	EQ: B2	No	No	No	*2004*	*$1,059,503*	*$391,939*	*$0*	*$1,451,442*
Your Location		1500 WALNUT AVE	DE BELL STARTER HOUSE	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$1,157,189**	**$407,969**	**$0**	**$1,565,158**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
28	A	DRIVING RANGE	672 SQ. FT.	Class: C	No	1946	0	EQ: B2	No	No	No	*2004*	*$71,089*	*$17,816*	*$0*	*$88,905*
Your Location		1500 WALNUT AVE	DRIVING RANGE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$77,643**	**$18,545**	**$0**	**$96,188**
PARKS		BURBANK CA 91501	OFFICE/RESTROOM	Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 4

Includes B & M
Filter: Burbank Parks
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Sprklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents	Year	Real Property	Personal Property	BI / Rents	Totals
28	B	GOLF CART MAINT.	1,055 SQ. FT.	Class: U	No	1965	0	EQ: B2	No	No	No	*2004*	*$99,799*	*$9,500*	*$0*	*$109,299*
Your Location		1500 WALNUT AVE.	GOLF CART MAINT.	UNKNOWN				Flood:	No	No	No	**2005**	**$109,000**	**$9,889**	**$0**	**$118,889**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
28	C	GOLF CART STORAGE	2,100 SQ. FT.	Class: M	No	1965	0	EQ: B2	No	No	No	*2004*	*$109,367*	*$5,939*	*$0*	*$115,306*
Your Location		1500 WALNUT AVE	GOLF CART STORAGE	MIXED NON-COMB/COMB				Flood:	No	No	No	**2005**	**$119,451**	**$6,182**	**$0**	**$125,633**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
30		CASTAWAY	12,772 SQ. FT.	Class: D	No	199-	1996	EQ: B2	No	No	No	*2004*	*$2,046,552*	*$0*	*$0*	*$2,046,552*
Your Location		1250 HARVARD RD	CASTAWAY	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$2,235,244**	**$0**	**$0**	**$2,235,244**
PARKS		BURBANK CA 91501	RESTAURANT	Notes:				Rent Notes:								
				Alarms:												
30	A	CLUBHOUSE/BALLROOM	10,488 SQ. FT.	Class: D	No	1962	0	EQ: B2	No	No	No	*2004*	*$1,870,193*	*$0*	*$0*	*$1,870,193*
Your Location		1250 HARVARD RD.	CLUBHOUSE /STARLIGHT	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$2,042,625**	**$0**	**$0**	**$2,042,625**
PARKS		BURBANK CA 91501	BALLROOM	Notes:				Rent Notes:								
				Alarms:												
30	B	MOUNTAINVIEW BALLROOM	6,426 SQ. FT.	Class: D	No	1962	0	EQ: B2	No	No	No	*2004*	*$1,178,442*	*$0*	*$0*	*$1,178,442*
Your Location		1250 HARVARD RD.	MOUNTAINVIEW	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$1,287,094**	**$0**	**$0**	**$1,287,094**
PARKS		BURBANK CA 91501	BALLROOM	Notes:				Rent Notes:								
				Alarms:												
31	A	GOLF COURSE	2,700 SQ. FT.	Class: C	No	1965	0	EQ: B2	No	No	No	*2004*	*$154,054*	*$4,331*	*$0*	*$158,385*
Your Location		WALNUT AVE.	GOLF COURSE MAINTENANCE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$168,258**	**$4,508**	**$0**	**$172,766**
PARKS		BURBANK CA 91501	EQUIPMENT STORAGE	Notes: Formerly Loc. 31				Rent Notes:								
				Alarms:												
32		STORAGE/RESTROOM	572 SQ. FT.	Class: C	No	1948	0	EQ: B2	No	No	No	*2004*	*$65,068*	*$0*	*$0*	*$65,068*
Your Location		KENNETH RD.& SCOTT RD.	STORAGE/RESTROOM	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$71,067**	**$0**	**$0**	**$71,067**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
33		STORAGE	0 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	*2004*	*$6,903*	*$0*	*$0*	*$6,903*
Your Location			STORAGE	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$7,539**	**$0**	**$0**	**$7,539**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												

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CITY OF BURBANK

December 17, 2004

Page 5

Includes B & M
Filter: Burbank Parks
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Personal Property Trend Factor: 4.09%

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34		BRACE PARK	52 SQ. FT.	Class: S	No	1960	0	EQ: B2	No	No	No	*2004*	*$2,044*	*$2,509*	*$0*	*$4,553*
Your Location PARKS		HAVEN WAY & SCOTT RD BURBANK CA 91501	STORAGE	ALL STEEL Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$2,232**	**$2,612**	**$0**	**$4,844**
35		RESTROOM	678 SQ. FT.	Class: CB	No	1992	0	EQ: B2	No	No	No	*2004*	*$10,937*	*$0*	*$0*	*$10,937*
Your Location PARKS		WILDWOOD CANYON PARK RD. BURBANK CA 91501	RESTROOM	CONCRETE BLOCK Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$11,945**	**$0**	**$0**	**$11,945**
36	A	PARK HEADQUARTERS	1,227 SQ. FT.	Class: B	No	1963	0	EQ: B2	No	No	No	*2004*	*$155,850*	*$24,943*	*$0*	*$180,793*
Your Location PARKS		124 S. LAKE ST. BURBANK CA 91502	PARK HEADQUARTERS	ALL REINFORCED CONCRETE Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$170,219**	**$25,963**	**$0**	**$196,182**
36	B	PARKS STORAGE	9,340 SQ. FT.	Class: C	No	1963	0	EQ: B2	No	No	No	*2004*	*$411,497*	*$51,070*	*$0*	*$462,567*
Your Location PARKS		124 S. LAKE ST BURBANK CA 91502	STORAGE	MASONRY CONST/WOOD ROOF Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$449,437**	**$53,159**	**$0**	**$502,596**
36	C		1,500 SQ. FT.	Class: CB	No	0	0	EQ: B2	No	No	No	*2004*	*$16,406*	*$53,448*	*$0*	*$69,854*
Your Location PARKS		124 S. LAKE ST. BURBANK CA 91502	CHEMICAL STORAGE	CONCRETE BLOCK Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$17,919**	**$55,634**	**$0**	**$73,553**
36	D	CHANGE ROOM	1,470 SQ. FT.	Class: B	No	1975	0	EQ: B2	No	No	No	*2004*	*$162,684*	*$21,379*	*$0*	*$184,063*
Your Location PARKS		124 S. LAKE ST. BURBANK CA 91502	CHANGE ROOM	ALL REINFORCED CONCRETE Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$177,683**	**$22,253**	**$0**	**$199,936**
36	E	STORAGE SHEDS	9,720 SQ. FT.	Class: B	No	1960	0	EQ: B2	No	No	No	*2004*	*$265,217*	*$22,566*	*$0*	*$287,783*
Your Location PARKS		124 S. LAKE ST. BURBANK CA 91502	STORAGE SHEDS	ALL REINFORCED CONCRETE Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$289,670**	**$23,489**	**$0**	**$313,159**
36	F	FOREMANS OFFICE	1,960 SQ. FT.	Class: B	No	1960	0	EQ: B2	No	No	No	*2004*	*$106,634*	*$19,004*	*$0*	*$125,638*
Your Location PARKS		124 S. LAKE ST. BURBANK CA 91502	FOREMANS OFFICE	ALL REINFORCED CONCRETE Notes: Alarms:				Flood: Rent Notes:	No	No	No	**2005**	**$116,466**	**$19,781**	**$0**	**$136,247**

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 6

Includes B & M
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37		TUTTLE CENTER	1,963 SQ. FT.	Class: C	No	1978	0	EQ: B2	No	No	No	2004	$214,636	$24,943	$0	$239,579
Your Location		ONTARIO ST.& MONTEREY	SENIOR CENTER	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	2005	$234,425	$25,963	$0	$260,388
PARKS		AV.		Notes:				Rent Notes:								
		BURBANK CA 91505														
				Alarms:												
38		VICROY PARK	1,103 SQ. FT.	Class: CB	No	1975	0	EQ: B2	No	No	No	2004	$112,101	$3,564	$0	$115,665
Your Location		NLY/ONTARIO & MONTEREY	STORAGE/RESTROOM	CONCRETE BLOCK				Flood:	No	No	No	2005	$122,437	$3,710	$0	$126,147
PARKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
73		OLIVE PARK	593 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	2004	$60,154	$0	$0	$60,154
Your Location		1111 W OLIVE	RESTROOMS	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	2005	$65,700	$0	$0	$65,700
PARKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
74		BRACE PARK	572 SQ. FT.	Class: C	No	0	0	EQ: B2	No	No	No	2004	$65,620	$1,780	$0	$67,400
Your Location		HAVEN WAY & SCOTT WAY	STORAGE AND	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	2005	$71,670	$1,853	$0	$73,523
PARKS		BURBANK CA 91504	RESTROOMS	Notes:				Rent Notes:								
				Alarms:												
75		BRACE PARK	280 SQ. FT.	Class: B	No	0	0	EQ: B2	No	No	No	2004	$30,076	$0	$0	$30,076
Your Location		HAVEN WAY & SCOTT ROAD	STORAGE BUNKER	ALL REINFORCED CONCRETE				Flood:	No	No	No	2005	$32,849	$0	$0	$32,849
PARKS		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												
76		BRACE PARK	212 SQ. FT.	Class: S	No	0	0	EQ: B2	No	No	No	2004	$10,937	$2,969	$0	$13,906
Your Location		HAVEN WAY & SCOTT ROAD	STORAGE	ALL STEEL				Flood:	No	No	No	2005	$11,945	$3,090	$0	$15,035
PARKS		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												
77		STORAGE BUNKER	280 SQ. FT.	Class: B	No	0	0	EQ: B2	No	No	No	2004	$27,342	$0	$0	$27,342
Your Location		HAVEN WAY & SCOTT ROAD		ALL REINFORCED CONCRETE				Flood:	No	No	No	2005	$29,863	$0	$0	$29,863
PARKS		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												
78		RESTROOMS	84 SQ. FT.	Class: S	No	0	0	EQ: B2	No	No	No	2004	$4,102	$3,564	$0	$7,666
Your Location		HAVEN WAY & SCOTT ROAD		ALL STEEL				Flood:	No	No	No	2005	$4,480	$3,710	$0	$8,190
PARKS		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 7

Includes B & M
Filter: Burbank Parks
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Sprklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	BI / Rents	Year	Real Property	Personal Property	BI / Rents	Totals
79		STOUGH PARK	644 SQ. FT.	Class: B	No	1988	0	EQ: B2	No	No	No	*2004*	*$69,070*	*$0*	*$0*	*$69,070*
Your Location		1249 LOCKHEED VIEW DR	LANDFILL SCALEHOUSE	ALL REINFORCED CONCRETE				Flood:	No	No	No	**2005**	**$75,438**	**$0**	**$0**	**$75,438**
PARKS		BURBANK CA 91501	RESTROOMS	Notes:				Rent Notes:								
				Alarms:												
80		STARTER SHACK	420 SQ. FT.	Class: D	No	0	0	EQ: B2	No	No	No	*2004*	*$28,858*	*$0*	*$0*	*$28,858*
Your Location		1500 WALNUT	PAR 3	ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$31,519**	**$0**	**$0**	**$31,519**
PARKS		BURBANK CA 91501		Notes:				Rent Notes:								
				Alarms:												
118		JOSLYN ADULT CENTER	5,300 SQ. FT.	Class: C	No	1988	0	EQ: B2	No	No	No	*2004*	*$1,052,500*	*$0*	*$0*	*$1,052,500*
Your Location		1301 WEST OLIVE AVE		MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$1,149,541**	**$0**	**$0**	**$1,149,541**
PARKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
120		POTTERY BUILDING	900 SQ. FT.	Class: C	No	1988	0	EQ: B2	No	No	No	*2004*	*$109,367*	*$35,631*	*$0*	*$144,998*
Your Location		1100 WEST CLARK	POTTERY BUILDING	MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$119,451**	**$37,088**	**$0**	**$156,539**
PARKS		BURBANK CA 91506		Notes:				Rent Notes:								
				Alarms:												
158		EARTHWALK PARK	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$60,079*	*$0*	*$0*	*$60,079*
Your Location		PEYTON AND GRISMER	PERMANENT CHARITIES	UNKNOWN				Flood:	No	No	No	**2005**	**$65,618**	**$0**	**$0**	**$65,618**
PARKS		BURBANK CA 91504	1/4 ACRE	Notes:				Rent Notes:								
				Alarms:												
159		WHITNALL HWY. PARK NORTH	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		WHITNALL AND CHANDLER	4 1/2 ACRES	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		BURBANK CA 91505		Notes:				Rent Notes:								
				Alarms:												
160		ROBERT LUNDIGAN PARK	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$120,158*	*$0*	*$0*	*$120,158*
Your Location		2701 THORNTON	1 1/3 ACRE	UNKNOWN				Flood:	No	No	No	**2005**	**$131,237**	**$0**	**$0**	**$131,237**
PARKS		BURBANK CA 91504	RESTROOM/STORAGE	Notes:				Rent Notes:								
				Alarms:												
161		WHITNALL HWY PARK	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		WHITNALL AND VERDUGO	4 ACRES	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		BURBANK CA 91504		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Includes B & M
Filter: Burbank Parks
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

December 17, 2004

Loc #	2nd Id	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
162		MAPLE STREET	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		PLAYGROUND	1/2 ACRE	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		3820 W. JEFFRIES STREET		Notes:				Rent Notes:								
		BURBANK CA 91502		Alarms:												
163		ROBERT GROSS PARK	5,500 SQ. FT.	Class: CB	No	0	0	EQ: B2	No	No	No	*2004*	*$180,236*	*$0*	*$0*	*$180,236*
Your Location		2814 EMPIRE AVENUE	4.85 ACRES/RESTROOM/	CONCRETE BLOCK				Flood:	No	No	No	**2005**	**$196,854**	**$0**	**$0**	**$196,854**
PARKS		BURBANK CA 91502	STORAGE/COMMUNITY CTR.	Notes:				Rent Notes:								
				Alarms:												
164		BEL AIRE PARK	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		1900 BEL AIRE DRIVE	1.75 ACRES	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		BURBANK CA 91504	BLEACHERS	Notes:				Rent Notes:								
				Alarms:												
165		MILLER PARK	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		720 E. PROVIDENCIA AVE.	1.6 ACRES	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		BURBANK CA 91501	RESTROOM/STORAGE	Notes:				Rent Notes:								
				Alarms:												
166		PALM BALLFIELD	0 SQ. FT.	Class: U	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		ORANGE GROVE/SUNSET	1.5 ACRES	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												
167		SANTA ANITA PLAY LOT	0 SQ. FT.	Class:	No	0	0	EQ: B2	No	No	No	*2004*	*$0*	*$0*	*$0*	*$0*
Your Location		250 W. SANTA ANITA AVE.	.34 ACRES	UNKNOWN				Flood:	No	No	No	**2005**	**$0**	**$0**	**$0**	**$0**
PARKS		BURBANK CA 91502		Notes:				Rent Notes:								
				Alarms:												

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

Page 9

Includes B & M
Filter: Burbank Parks
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December 17, 2004

Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$24,215,975	$1,654,445	$0	$25,870,420
SPRINKLERED:	2004	$1,342,494	$0	$0	$1,342,494
UNSPRINKLERED:	2004	$22,873,481	$1,654,445	$0	$24,527,926
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$26,364,864	$1,718,030	$0	$28,082,894
SPRINKLERED:	2005	$1,466,272	$0	$0	$1,466,272
UNSPRINKLERED:	2005	$24,898,592	$1,718,030	$0	$26,616,622
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

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PEPIP-CA PROPERTY SCHEDULE
CITY OF BURBANK

December 17, 2004

Page 1

Includes B & M
Filter: Burbank Redev't Agen
Real Property Trend Factor: 9.22%
Personal Property Trend Factor: 4.09%

Loc #	2nd Id	Address, City, Zip	Occupancy	Construction	Auto Spklr	Year Built	Year Apprs	Zone	Real Prop	Pers Prop	Bl / Rents	Year	Real Property	Personal Property	Bl / Rents	Totals
191			6,500 SQ. FT.	Class: D	No			EQ: B2	No	No	No	*2004*	*$378,313*	*$0*	*$0*	*$378,313*
Your Location		313 WEST VALENCIA		ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$413,193**	**$0**	**$0**	**$413,193**
REDEVT. AGEN		BURBANK CA 91510		Notes: 4 units apartment complex. 2 units occupied.				Rent Notes:								
				Alarms:												
192			1,200 SQ. FT.	Class: D	No			EQ: B2	No	No	No	*2004*	*$243,678*	*$0*	*$0*	*$243,678*
Your Location		427 WEST VALENCIA		ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$266,145**	**$0**	**$0**	**$266,145**
REDEVT. AGEN		BURBANK CA 91510		Notes: One story 2-bedroom house.				Rent Notes:								
				Alarms:												
215		INDUSTRIAL BUILDING	7,750 SQ. FT.	Class: C	No			EQ:	No	No	No	*2004*	*$525,700*	*$0*	*$0*	*$525,700*
Your Location		STORAGE		MASONRY CONST/WOOD ROOF				Flood:	No	No	No	**2005**	**$574,105**	**$0**	**$0**	**$574,105**
REDEVT. AGEN		57 EAST PALM AVE		Notes:				Rent Notes:								
		BURBANK CA														
				Alarms:												
216		12 UNIT APARTMENT	9,835 SQ. FT.	Class: D	No			EQ:	No	No	No	*2004*	*$1,000,000*	*$0*	*$0*	*$1,000,000*
Your Location		BUILDING		ALL COMB (WOOD FRAME)				Flood:	No	No	No	**2005**	**$1,092,200**	**$0**	**$0**	**$1,092,200**
REDEVT. AGEN		1729-35 ELLIOT DRIVE		Notes: Five Separate buildings, all constructed from 1924 to 1963.				Rent Notes:								
		BURBANK CA		1729 A, Single Story-Built 1924-937 sq ft												
				1729 B&C, 2 story,built 1924, 1215 sq ft												
				1731 B&C, single story, constructed in 1956, 980 sq ft												
				1733 A-F, 2 story townhome apts, 5424 sq ft												
				1735, single story, built in 1963, 1369 sq ft												
				Alarms:												
218		GRISMER APARTMENT	70,950 SQ. FT.	Class: D	No	1965	9/04	EQ: B2	No	No	No	*2004*	*$7,061,100*	*$47,000*	*$0*	*$7,108,100*
Your Location		COMPLEX	APARTMENT - LOW RISE	ALL COMB (WOOD FRAME)				Flood: X	No	No	No	**2005**	**$7,752,600**	**$47,000**	**$0**	**$7,799,600**
REDEVT. AGEN		84-UNIT APARTMENT		Notes: 84-UNIT APT COMPLEX C/O: 5				Rent Notes:								
ISO Code: 1		COMPLEX	Pct. Sprnkl: 0	BLDGS (2 & 3 STORY); MULTI-FAMILY;												
		1801 GRISMER AVE.		ONE & TWO BEDROOMS, 1.5 BATHS;												
		BURBANK CA 91504		CONTENTS VALUED @ $500/UNIT.												
		Stories: 3/2		RENOVATIONS SCHED 2006.												
				Alarms: STANDPIPES W/CABS												

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Loc #	2nd Id	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

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2004	$9,208,791	$47,000	$0	$9,255,791
SPRINKLERED:	2004	$0	$0	$0	$0
UNSPRINKLERED:	2004	$9,208,791	$47,000	$0	$9,255,791
EARTHQUAKE:	2004	$0	$0	$0	$0
FLOOD:	2004	$0	$0	$0	$0

	Year	Real Property	Personal Property	BI / Rents	Totals
GRAND TOTALS:	2005	$10,098,243	$47,000	$0	$10,145,243
SPRINKLERED:	2005	$0	$0	$0	$0
UNSPRINKLERED:	2005	$10,098,243	$47,000	$0	$10,145,243
EARTHQUAKE:	2005	$0	$0	$0	$0
FLOOD:	2005	$0	$0	$0	$0

Critical Assets

The City of Burbank views all of its owned assets as critical to the City's ability to provide services to its citizens in the event of disaster or emergency.

Two facilities thought to be crucial to the city's infrastructure are:

- Bob Hope Airport
- Burbank Water and Power Department

Special Districts, Services

Burbank Unified School District (See Appendix 1, Burbank Unified School District Hazard Mitigation Plan)

Elementary Schools

Walt Disney Elementary - 1220 West Orange Grove Ave. Telephone: (818) 558-5385

Thomas Edison Elementary - 2110 West Chestnut Street Telephone: (818) 558-4644

Ralph Emerson Elementary - 720 East Cypress Ave. Telephone: (818) 558-5419

Bret Harte Elementary - 3200 West Jeffries Ave. Telephone: (818) 558-5533

Thomas Jefferson Elementary - 1900 N. Sixth Street Telephone: (818) 558-4636

William McKinley Elementary - 349 W. Valencia Ave. Telephone: (818) 558-5477

Joaquin Miller Elementary/ Kindergarten - 720 East Providencia Ave. Telephone: (818) 558-5460

Providencia Elementary - 1919 North Ontario Street Telephone: (818) 558-5470

Theodore Roosevelt Elementary - 850 North Cordova Street Telephone: (818) 558-4668

R. L. Stevenson Elementary - 3333 Oak Street Telephone: (818) 558-5522

George Washington Elementary - 2322 North Lincoln Street Telephone: (818) 558-5550

Middle Schools

Luther Burbank Middle School - 3700 West Jeffries Ave. Telephone: (818) 558-4646

David Starr Jordan Middle School - 420 South Mariposa Street Telephone: (818) 558-4622

John Muir Middle School - 1111 North Kenneth Road Telephone: (818) 558-5320

High Schools

Burbank High School - 902 North Third Street Telephone: (818) 558-4700

John Burroughs High School - 1920 Clark Ave. Telephone: (818) 558-4777

Monterey High School - 1915 Monterey Ave. Telephone: (818) 558-5455

Additional Schools

Burbank Adult School - 3811 Allan Ave. Telephone: (818) 558-4611

Community Day School - 625 South San Fernando Road 818-558-4693

Magnolia Park School - 827 North Avon Avenue Telephone: (818) 558-4677

School Site Map (Including Private Schools)

Utilities

Water - Burbank Water & Power

- 26,277 meters
- 17,564,900 gallons - average daily
- 262.14 miles of water mains (plus 5.36 miles of reclaimed water mains)

Electric - Burbank Water & Power

- 50,702 meters
- 398 miles of transmission and distribution lines
- 246,400 KW - generating capacity
- 246,000 KW - annual peak demand

Gas - Southern California Gas Company

Telephone – SBC - Pacific Bell

Health Care

Hospitals in the City of Burbank

- **PROVIDENCE SAINT JOSEPH MEDICAL CTR** (501 SOUTH BUENA VISTA)

Other Hospitals/Medical Centers Near Burbank

- PACIFICA HOSPITAL OF THE VALLEY (about 5 miles; SUN VALLEY, CA)
- KAISER FOUNDATION HOSPITAL (about 6 miles; LOS ANGELES, CA)
- HOLLYWOOD COMMUNITY HOSPITAL (about 6 miles; HOLLYWOOD, CA)
- GLENDALE COMMUNITY HOSPITAL (Glendale)
- GLENDALE ADVENTIST HOSPITAL (Glendale)

Higher Education

Colleges/Universities in the City of Burbank

- **WOODBURY UNIVERSITY** (Full-time enrollment: 1,084; Location: 7500 GLENOAKS BLVD; Private, not-for-profit; Website: www.woodbury.edu; Offers Master's degree)
- **ELEGANTE BEAUTY COLLEGE** (FT enrollment: 51; Location: 2107 N GLENOAKS BLVD; Private, for-profit; Website: www.elegantebc.f2s.com)
- **FILM INDUSTRY WORKSHOPS INC** (Location: 1425 Broadway; Private, not-for-profit)
- **PROFESSIONAL PILOT TRAINING** (Location: 4531 W EMPIRE AVE #205; Private, for-profit; Website: www.profpilot.com)
- **WEIST-BARON-HILL SCHOOL OF TELEVISION** (Location: 4300 W MAGNOLIA; Private, for-profit)
- **M C WESTMORE ACADEMY OF COSMETIC ARTS** (Location: 916 W BURBANK BLVD STE R; Private, for-profit)

Colleges/Universities with Over 2000 Students Nearest to Burbank

- LOS ANGELES CITY COLLEGE (about 7 miles; LOS ANGELES, CA; Full-time enrollment: 8,298)
- GLENDALE COMMUNITY COLLEGE (about 7 miles; GLENDALE, CA; FT enrollment: 7,964)
- LOS ANGELES VALLEY COLLEGE (about 8 miles; Valley Glen, CA; FT enrollment: 8,900)
- LOS ANGELES TRADE TECHNICAL COLLEGE (about 11 miles; LOS ANGELES, CA; FT enrollment: 8,528)
- FASHION INSTITUTE OF DESIGN AND MERCH-LOS ANGELES (about 11 miles; LOS ANGELES, CA; FT enrollment: 2,112)
- UNIVERSITY OF CALIFORNIA-LOS ANGELES (about 11 miles; LOS ANGELES, CA; FT enrollment: 35,930)
- LOS ANGELES MISSION COLLEGE (about 12 miles; Sylmar, CA; FT enrollment: 3,449)
- UNIVERSITY OF SOUTHERN CALIFORNIA (about 16 miles; LOS ANGELES CA – FT ENROLLMENT 28,395)

Business & Industry

Employers

The list below shows the 20 top employers in the City of Burbank showing the number of people employed:

THE WALT DISNEY COMPANY	5,916	Entertainment
WARNER BROS. ENTERTAINMENT INC.	5,000	Entertainment
PROVIDENCE/ST. JOSEPH HOSP.	3,500	Medical
BURBANK UNIFIED SCHOOL DIST.	2,010	Education
CITY OF BURBANK	1,509	Municipal Government
BOB HOPE AIRPORT	1,400	Aviation
NBC WEST, LLC	1,278	Entertainment
HEALTH LINE CLINICAL LABS	560	Medical
FOTO-KEM	552	Media Related
CLEAR CHANNEL COMMUNICATIONS	477	Entertainment
CRANE CO., HYDRO-AIRE DIV.	401	Aerospace
SENIOR AEROSPACE – SSP	376	Aerospace
AUTOMOBILE CLUB OF SO. CA.	370	Business Services
ENTERTAINMENT PARTNERS/CENTRAL	364	Entertainment
WARNER MUSIC GROUP INC.	363	Entertainment
4MC – BURBANK INC.	319	Entertainment
FRY'S ELECTRONICS	308	Retail
TECHNICOLOR INC.	300	Media Related
ARAMARK UNIFORM SERVICE, INC.	295	Business Services
MACY'S DEPARTMENT STORE	286	Retail

Media

Businesses looking for close proximity to the media industry find Burbank their top choice. Burbank is home to three major studios: The Walt Disney Company, Warner Bros. and NBC's West Coast Headquarters. All three studios have initiated master plans for expansion over the next twenty years: The Walt Disney Company, 1.81 million square feet; Warner Bros., 3.3 million square feet; NBC, 1.9 million square feet. Burbank is also home to over 700 media-related businesses that employ approximately 18,000 people. Notable media-related production operations include Nickelodeon Animation Studios, DIC Animation, Cartoon Network and Dick Clark Productions. Notable media-related post-production operations include Foto-Kem Industries and Four Media.

Employment

Study of Burbank's "Employment Base"

The Natelson Company, Inc. (TNCI)

How many jobs are based in Burbank?

The number of jobs based in Burbank is estimated at approximately **99,000**. The estimated breakdown of this total by major industry group is as follows:

Table A **Daytime Population** **City of Burbank**		
Industry Group	**Total Jobs**	**%**
Agriculture/Mining/Construction	2,000	2.0%
Manufacturing	9,000	9.1%
Transportation/Communications/Public Utilities (TCPU)	4,000	4.1%
Wholesale Trade	3,000	3.0%
Retail Trade	13,000	13.0%
Finance, Insurance, Real Estate ("FIRE")	4,000	4.1%
Services:		
Entertainment/Media	29,000	29.3%
Other Services	31,000	31.3%
Government	4,000	4.1%
TOTAL	***99,000***	***100%***
Source: The Natelson Company, Inc.		

It should be emphasized that the above numbers represent average annual employment levels. In some industries, the number of jobs varies significantly throughout the year. This is especially true in the entertainment/media industries.

How many people work in Burbank's entertainment and media firms?

TNCI estimates that entertainment/media firms provide the equivalent of 29,000 full-time jobs in the City. This number is included in the 99,000 total jobs in the City. The estimated 29,000 entertainment/media jobs is an average annual number. During the course of the year, TNCI estimates that the number of full-time equivalent (FTE) jobs in the industry ranges from 22,000 to 35,000. It is important to note that many of these jobs are short-term in nature. Thus, the estimate of 29,000 FTE jobs actually translates into a much larger number of people who work (at least part of the year) in the entertainment and media sectors.

What is the average wage/salary level for **all** jobs based in Burbank?

TNCI estimates that the average annual wage/salary for all jobs based in Burbank is approximately $60,000 (in 2002 dollars). This number is substantially higher – approximately 71% - than the Los Angeles County average of $35,000.

What is the average wage/salary level for Burbank's entertainment/media jobs?

TNCI estimates that the average wage/salary for Burbank's entertainment/media jobs is in the range of $75,000 to $80,000 per year (in 2002 dollars).

The table below provides a summary of the different income estimates provided in TNCI's study:

Table B
Comparison of Average Wage/Salary Levels
City of Burbank vs. County of Los Angeles

Area	Average Annual Wage/Salary Per FTE Job
City of Burbank	
Entertainment/Media Workers	$75,000 - $80,000
All Other Workers	$53,000
Overall Average	**$60,000**
County of Los Angeles	**$35,000**

Source: The Natelson Company, Inc.

Reviewing the above numbers, it is clear that the relatively high incomes associated with entertainment/media jobs are one reason the City's overall wage/salary levels are so much higher than the countywide average. However, they are not the only reason. Burbank's "other" jobs have an average annual wage/salary level of $53,000, which is also well above the countywide average.

Note: All employment and income numbers reported in this summary relate to jobs that are based in Burbank, regardless of where the workers live. These numbers do not reflect the employment and income characteristics of the City's resident population (who may or may not work in the City).

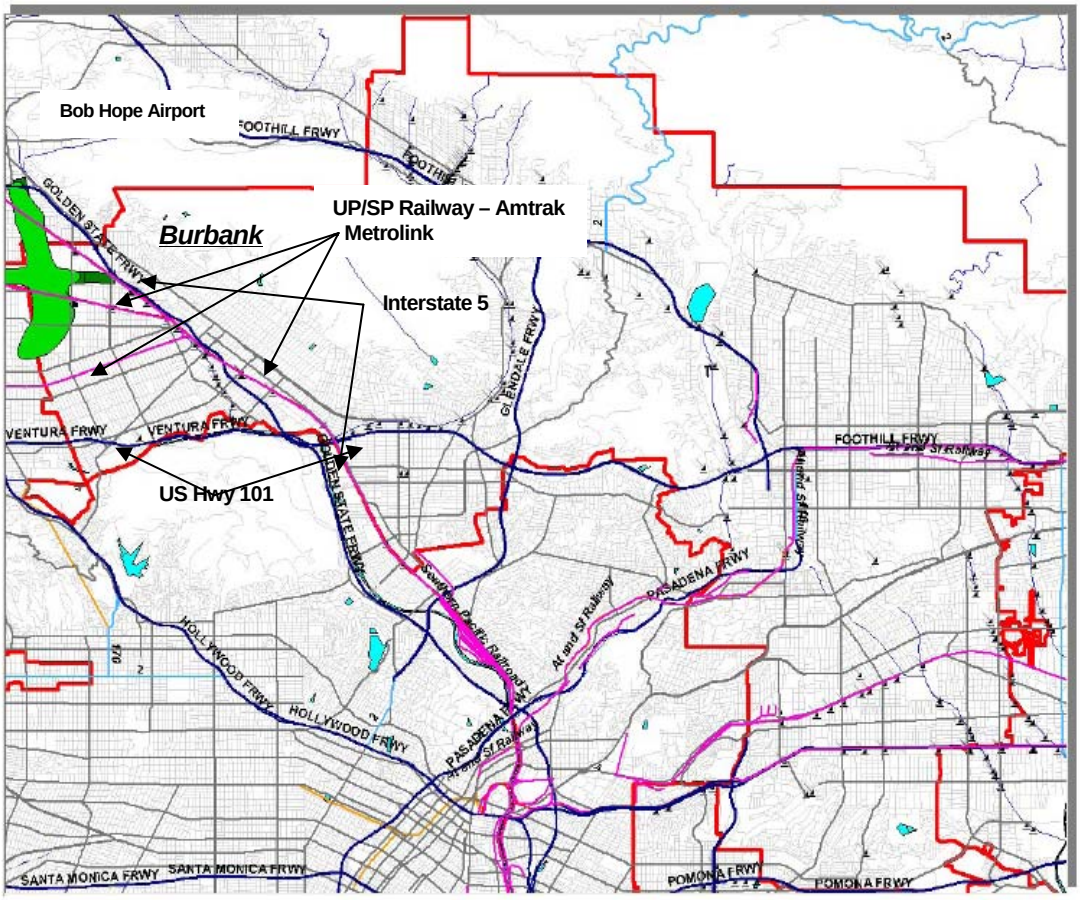
INDUSTRY GROUP	TOTAL JOBS	%
Agriculture/Mining/Construction	2,000	2.0%
Manufacturing	9,000	9.1%
Transportation/Communications/Public Utilities (TCPU)	4,000	4.1%
Wholesale Trade	3,000	3.0%
Retail Trade	13,000	13.0%
Finance, Insurance, Real Estate ("FIRE")	4,000	4.1%
Services:		
Entertainment/Media	29,000	29.3%
Other Services	31,000	31.3%
Government	4,000	4.1%
TOTAL	**99,000**	**100%**

Source: The Natelson Company, Inc.

Entertainment/media firms provide the equivalent of 29,000 full-time jobs in the City. The average wage/salary for Burbank's entertainment/media jobs is in the range of $75,000 to $80,000 per year (in 2002 dollars).

The average annual wage/salary for all jobs based in Burbank is approximately $60,000 (in 2002 dollars). This number is substantially higher – approximately 71% - than the Los Angeles County average of $35,000. The table below provides a summary of the different income estimates:

Transportation



Freeways/Major Highways

- Golden State Freeway (Interstate 5)
- Ventura Freeway (State Route 134)
- State Route 650
- State Route 599
- Glenoaks Boulevard
- San Fernando Boulevard
- Victory Boulevard
- Alameda Avenue

Railways

- UP/SP Railway also serving AMTRAK passenger trains

Airports

Airports certified for carrier operations nearest to Burbank:

- BOB HOPE *formerly Burbank, Glendale, Pasadena Airport* (about 3 miles; BURBANK, CA; ID: BUR)
- LOS ANGELES INTL (about 18 miles; LOS ANGELES, CA; ID: LAX)
- LONG BEACH /DAUGHERTY FIELD/ (about 28 miles; LONG BEACH, CA; ID: LGB)
- ONTARIO (about 32 miles; ONTARIO, CA, - ID ONT)

Other public-use airports nearest to Burbank:

- WHITEMAN (about 7 miles; LOS ANGELES, CA; ID: WHP)
- VAN NUYS (about 11 miles; VAN NUYS, CA; ID: VNY)
- SANTA MONICA MUNI (about 15 miles; SANTA MONICA, CA; ID: SMO)

Mass Transit

- METROLINK Commuter Train Service

Community Services

Community Parks and Recreation Programs

The City of Burbank owns and operates a variety of parks and recreation facilities. They are managed by the Burbank Park, Recreation and Community Services Department. The facilities are listed below:

PARK FACILITIES INVENTORY

FACILITY	ADDRESS	ZIP	TELEPHONE	ACREAGE
Abraham Lincoln Park	300 North Buena Vista Street	91506	None	2.50
Bel Aire Ballfield	1750 Bel Aire Drive	91504	None	1.75
Brace Canyon Park	2901 Haven Way	91504	238-5415	20.05
Bret Harte Playlot	3200 West Jeffries Avenue	91505	None	---
Burbank Center Stage	555 North Third Street	91502	558-7000	---
Burbank Little Theater	1100 West Clark Avenue	91506	238-9998	---
Burbank Tennis Center (at McCambridge Park)	249 East Amherst Drive	91504	843-4105	---
Compass Tree Park	601 South Lake Street	91502	None	< .10
Creative Arts Center (at Izay Park)	1100 West Clark Avenue	91506	238-5397	---

FACILITY	ADDRESS	ZIP	TELEPHONE	ACREAGE
DeBell Golf Course	1500 Walnut Avenue	91501	845-0022	113.39
Par 3 (included in acreage)	1200 Harvard Road	91501	848-3292	---
Earthwalk Park	1922 Grismer Street	91504	None	< ..25
George Izay Park/Olive Recreation Ctr.	1111 West Olive Avenue	91506	238-5385	15.36
Sports Office	1111 West Olive Avenue	91506	238-5330	---
Johnny Carson Park	400 South Bob Hope Drive	91505	238-5411	17.62
Joslyn Adult Center (at Izay Park)	1301 West Olive Avenue	91506	238-5353	---
Maple Street Playground	3820 West Jeffries Avenue	91505	None	<..25
McCambridge Park	1515 North Glenoaks Boulevard	91504	238-5378	17.80
McCambridge Park Pool	1515 North Glenoaks Boulevard	91504	238-5381	---
Miller Park (at Miller School)	720 East Providencia Avenue	91501	None	1.60
Mountain View Park	751 South Griffith Park Drive	91506	238-5417	2.48
Pacific Park	3715 Pacific Avenue	91505	238-5405	5.29
Palm Ballfield	1125 East Orange Grove	91501	None	1.50
Ralph Foy Park	3211 West Victory Boulevard	91505	238-5404	10.00
Roller Hockey Rink	3211 West Victory Boulevard	91505	845-0960	---
Robert Ovrom Park (future park)	600 South San Fernando Boulevard	91502	None	1.40
Robert E. Gross Park	2814 West Empire Avenue	91504	238-5403	4.85
Robert E. Lundigan Park	2701 Thornton Avenue	91504	238-5409	1.32
Santa Anita Playlot	250 West Santa Anita Avenue	91502	None	.34
Starlight Bowl	1249 Lockheed View Drive	91504	238-5400	---
Stough Canyon Nature Center	2300 Walnut Avenue	91504	238-5440	---
Stough Park	1335 Lockheed View Drive	91504	238-5460	103.57*
Tuttle Adult Center (at Foy Park)	1731 North Ontario Street	91505	238-5367	---
Valley Park/Skate Park	1625 North Valley Street	91505	238-5413	4.44
Verdugo Park	3201 West Verdugo Avenue	91506	238-5390	8.00
Verdugo Park Pool	700 North California Street	91505	238-5391	---
Vickroy Park	2300 Monterey Place	91506	238-5407	1.40
Whitnall Highway Park North	2302 North Whitnall Highway	91505	None	4.50
Whitnall Highway Park South	610 North Whitnall Highway	91505	None	4.40
Wildwood Canyon Park	1701 Wildwood Canyon Road	91501	None	500.00**

* Stough Park 7 acres are developed

** Wildwood Park 15 acres are developed

Special Services

The City of Burbank Park, Recreation and Community Services Department publishes guides to assist residents locate special services and activities.

1. The Senior Services Division through the Retired and Senior Volunteer Program and the National Senior Service Corps produces the "Senior Human Resource Information Guide" which provides listings of agencies and organizations that offer services to seniors.

2. In October 1998, the City of Burbank City Council convened a Youth Task Force. The purpose of this Task Force was to bring together youth-service agencies in the community to assess the needs of Burbank youth and identify how best to collectively meet these needs. One of the committee's tasks was to develop a comprehensive directory of youth-related programs, activities and services. The result is the development of the "Burbank Youth Resource Guide" which provides information regarding the wide variety of opportunities offered for youth in the community, including child care, counseling and mental health, employment and job training, telephone hotlines, mentoring programs, parenting classes, recreation programs, transportation, youth groups, and volunteering opportunities.

3. The Burbank Child Care Committee publishes the "Burbank Child Care Directory." The Mission Statement for the Burbank Child Care Committee is as follows:

   "The Burbank Child Care Committee acknowledges that child care is an essential element of an environment that supports and sustains family life while supporting economic growth. The goals of the Committee are to serve as a resource, identify child care needs and promote the availability of safe, high-quality, accessible and affordable child care in Burbank, both to residents and to commuting employees. Further, the Committee shall make recommendations on childcare policy to the Burbank City Council."

4. The Recreation Services Division produces a quarterly "Recreation Guide" in the spring, summer, fall, and winter. This publication provides information for city recreation programs and activities as well as social services. This includes after school programs, cultural arts, day camps, seniors and active adults, sports, nature, special events, transportation, park and facility information, and a variety of classes, services and activities.

Community-based Organizations

The following is a list of clubs and organizations operating in and near the City of Burbank:

Clubs/Organizations

ASSOCIATION	CONTACT
American Association of University Women 110 Reese Place, Burbank, CA 91506	Elaine Thomas 818-845-6968
American Cancer Society, Burbank 500 N Victory Blvd., Burbank, CA 91502	818-841-3800
American Cancer Society, S.F. Valley 4940 Van Nuys Blvd. Ste. 301, Sherman Oaks, 91403	Jill Arnstein 818-905-7766 #3
American Heart Assosiation 816 S. Figueroa, Los Angeles, CA 90017	Roman Bowser 213-291-7000
American Legion, Post 150 940 W. Olive Ave., Burbank, CA 91506	Michael Gombar 818-846-0683
American Red Cross-LA Chapter/Burbank District 1001 W. Magnolia Blvd., Burbank, CA 91506	Maria Cantero 818-842-5295
American Youth Soccer Org., Region 254 P. O. Box 7209, Burbank, CA 91510-7209	818-841-AYSO
Assistance League 3100 W. Burbank Blvd., Suite 100 Burbank, CA 91505	Patty Williams
Auld Lang Syne Club, Josylyn Center 1301 W. Olive Ave., Burbank, CA 91506	Helma Malikan 818-843-3097
Boys and Girls Club of Burbank 2244 N. Buena Vista St., Burbank, CA 91505	Jeremy Floyd 818-842-9333
Boys Scouts of America/Verdugo Hills Council 1325 Grandview Ave., Glendale, 91201	818-243-6282
Burbank Association of Realtors 2006 W. Magnolia Blvd., Burbank, CA 91506	Debra Breakspear 818-845-7643
Burbank Art Association 140 S. Parish Place, Burbank, CA 91506	Jean Hutton 818-848-1054
Burbank Center for the Retarded 230 E. Amherst Dr., Burbank, CA 91504	Rachel Galperin 818-843-4907
Burbank Philharmonic Orchestra P.O. Box 6345, Burbank, CA 91510	Lynda Willner 818-771-7888
The Burbank Chorale P.O. Box 501, Burbank, CA 91503	Marilyn Momeny 818-317-9903
Burbank City Employee's Association 221 W. Alameda Ave. #103, Burbank, CA 91502	Bob Kaczmarek 818-843-8650
Burbank Civitan Club P.O. Box 668 Burbank, CA 91503	Morey Goodstein 818-848-7189
Burbank Council PTA 1900 W. Olive Ave., Burbank, CA 91506	Sonya Arce 818-845-5619

Clubs/Organizations

ASSOCIATION	CONTACT
Burbank Educational Foundation P.O. Box 1788, Burbank, CA 91507	Linda Rosen 818-843-7465
Burbank Housing Corporation 241 W. Verdugo Ave., Burbank, CA 91502	Judith Arandes 846-8495
Burbank Human Relations Council P.O. Box 3333, Burbank, CA 91504	John Brady 818-841-4038
Burbank Jaycees P.O. Box 801, Burbank, CA 91503	Jackie Lewis 818-569-7526
Burbank Lodge #406 406 Irving Drive, Burbank, CA 91504	Norman A. Furman 818-848-3750
Burbank Magnolia Park Optimists 150 S. Glenoaks Blvd. #9107, Burbank, CA 91510	Lorine Mendell
Burbank Masonic Lodge #406 406 Irving Drive, Burbank, CA 91504	Norman A. Furman 818-848-3750
Burbank Ministerial Association 2707 N. Glenoaks, Burbank, CA 91504	Rev. Paul Claireville 818-842-5264
Burbank Moose Lodge #652 1901 W. Burbank Blvd., Burbank, CA 91506	Stanley Bucklein 818-843-0284
Burbank Noon Lions Club 3074 N. Lima St., Burbank, CA 91504	Barry Alberts 818-244-6666X23
Burbank Noon Rotary Club P.O. Box 10036, Burbank, CA 91510	Katherine Richards 213-489-9800
Burbank/Downtown Optimists Club 12734 Branford Rd. Unit 17, Arleta, CA 91331	Ron Villachica 818-763-1283
Burbank on Parade 1501 W. Magnolia Blvd., Burbank, CA 91506	Joanne Miller 818-846-8910
B. P. O. Elks #1497 145 E. Palm Ave., Burbank, CA 91502	John Hitchens 818-848-8055
Burbank Sister City Committee c/o Burbank Public Library 110 N. Glenoaks Blvd., Burbank, CA 91502	Sharon Cohen 818-238-5551
Burbank Sunrise Rotary 1317 N. San Fernando #105, Burbank, CA 91504	Greg Simay 818-843-5751
Burbank Symphony Association P.O. Box 4141, Burbank, CA 91053	Michelle Feather 818-845-3766
Burbank Temporary Aid Center 1304 W. Burbank Blvd., Burbank CA 91505	Barbara Howell 818-846-2330

Clubs/Organizations

ASSOCIATION	CONTACT
Burbank Tournament of Roses P.O. Box 373 Burbank, CA 91503	Teri Bastian 818-840-0064
Burbank Valley Garden Club 535 N. California St., Burbank, CA 91505	Mary Waddington 818-563-2935
Burbank Y's Men (Service Club for Burbank YMCA) 624 N. Myers St., Burbank, CA 91506	Denny Grossman 818-841-0387
Entertainment Industry Foundation 11132 Ventura Blvd., Ste. 401, Studio City, CA 91604	Stephen Ceryanek 818-760-7722
Family Service Agency of Burbank 2013 W. Magnolia Blvd., Burbank, CA 91506	Laurie Bleick 818-845-7671
Fine Arts Federation of Burbank P.O. Box 6459, Burbank, CA 91510	Kim Freed 818-238-5397
Foothill Civitan Club 2352 N. Orchard Dr., Burbank, CA 91504	Karen Hubbard 818-842-4370
Foothill Service Club for the Blind 117 E. Los Feliz Rd., Glendale	Cindy Frank 818-846-0759
Friends of Burbank Public Library 4278 Kling St. Burbank, CA 91505	Eileen Cobos 818-845-2333
Hula Haloau O Kamuela II 905 S. Victory Blvd., Burbank, CA 91103	Edward Kunewa 818-841-3547
Joslyn Adult Center P.O. Box 6459, Burbank, CA 91510	Gayle Midgen 818-238-5353
Joslyn Center Men's Club 557 E. Verdugo Ave., #C, Burbank, CA 91501	Doug Halter 818-238-5353
Joslyn Sing-a-Long Club 524 N. Orchard Dr., Burbank, CA 91506	Ruth Beckman 818-238-5353
Keystone Seniors Club 320 W. Cedar, Burbank, CA 91506	Florence Nos 818-846-1796
Kiwanis Burbank Sunrise Club 914 E. Providencia Ave., Burbank, CA 91501	
Kiwanis Club of Burbank (Noon Club) P.O. Box 697 Sun Valley, CA 91353	Marsha Jackson 818-767-7756
LA Providencia Guild of Children's Hospital 730 E. Angelino Burbank, CA 91501	Irene Terusa 818-842-7594
Leukemia Society of America 6033 W. Century Blvd., Suite 300 Los Angeles, CA 90045	310-216-7600
Magnolia Park Masonic Lodge #618 406 Irving Dr., Burbank, CA 91504	Wayne Togerson 818-848-2926

Clubs/Organizations

ASSOCIATION	CONTACT
Magnolia Park Optimists Club P.O. Box 747, Burbank, CA 91503	Bob Stoll 818-846-2791
March of Dimes 3699 Wilshire Blvd., Suite 520, Los Angeles, CA 90010	Lori Gangemi 213-637-5050
National Federation of the Blind of Calif., Inc. 175 E. Olive Ave., Ste. 308, Burbank CA 91502	Nancy Burns 818-558-6524
New Way Foundation, Inc. 844 North Hollywood Way Burbank, CA 91505	Art Angel 818-842-9446
Optimist Club of Burbank P.O. Box 11166, Burbank, CA 91510	Wayne Mathis 818-845-5895
Providence St. Joseph Foundation 501 S. Buena Vista, Burbank, CA 91505	Pat Modrzejewski 818-843-5111
Retired Public Empoyees Chapter 26 Joslyn Adult Center, P.O. Box 6459, Burbank, CA 91510	Robert Spenser 818-238-5353
Retired & Senior Volunteer Program (R.S.V.P.) P.O. Box 6459, Burbank, CA 91510	Dee Call 818-238-5370
Road Kings Car Club of Burbank P.O. Box 11135, Burbank, CA 91505	Don Baldaseroni 818-842-5464
Salvation Army 300 E. Angeleno Ave., Burbank, CA 91502	Ericka Hernandez 818-845-7214
St. Annes Outreach 1612 W. Glenoaks Blvd., Glendale, CA 91201	Gladwin Gill 818-551-4901
Sertoma 1819 Richard St., Burbank, CA 91504	Sandra Tomer 818-848-8536
Student Council-St. Finbar School 2120 W. Olive Ave., Burbank, CA 91506	Karen Galindo 818-848-0191
Tripod 1727 W. Burbank Blvd., Burbank, CA 91506	Chris Opie 818-972-2080
United Daughters of the Confederacy 806 Stephen Road, Burbank, CA 91504-1945	Louise Grice 818-845-6696
United Way 5121 Van Nuys Blvd., #206, Van Nuys, CA 91403	Frank Chimarusti 818-380-2560
Verdugo Hills Council-Boy Scouts of America 1325 Grandview Ave., Glendale, CA 90201	Paul M. Lacayo 818-243-6282
Western Weavers Square Dance Club 3262 Park Vista Drive, La Crescenta, CA 91214	818-763-0948

Clubs/Organizations

ASSOCIATION	CONTACT
Woman's Club of Burbank 328 N. Mariposa, Burbank, CA 91506-2038	Julia Larsen 818-846-8609
YMCA Burbank Family 321 E. Magnolia Blvd., Burbank, CA 91502	Susan Sebastian 818-845-8551 x236
Zonta Club 836 N. Parish Place, Burbank, CA 91506	Leonora Bellis 818-845-4560

Climate

Local Meteorology

63 degrees average yearly temperature. Average yearly rainfall is 12.1 inches based on a 100-year average. Average humidity is 61%. Prevailing winds are in the southwesterly direction with a mean hourly speed of 2 to 4 MPH.

Average weather in Burbank, 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)	54.8	56.9	58.4	62.2	65.9	70.8	75.5	76.2	73.5	67.6	59.5	54.6
High temperature (°F)	67.5	69.5	70.6	74.9	77.5	83.2	88.9	89.9	87.1	81.5	73.5	67.9
Low temperature (°F)	42.0	44.3	46.2	49.5	54.2	58.3	62.1	62.4	59.9	53.6	45.4	41.3
Precipitation (in)	3.6	4.3	3.9	1.0	0.4	0.1	0.0	0.2	0.3	0.6	1.1	2.2

Normal climate around Burbank, California

Based on data reported by main weather stations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days with precipitation	6	5	5	3	1	0	0	0	1	2	3	5
Wind speed (mph)	5.2	6.0	6.7	7.4	7.1	7.0	6.8	6.6	6.2	5.6	5.2	5.0
Morning humidity (%)	76	78	80	80	81	82	82	82	83	81	79	77
Afternoon humidity (%)	53	54	55	51	55	56	54	53	54	54	53	52
Sunshine (%)	70	71	72	72	65	65	73	74	74	72	75	71
Days clear of clouds	12	10	11	12	10	12	18	19	15	13	13	13
Partly cloudy days	8	7	9	10	13	12	11	10	11	11	8	8
Cloudy days	11	11	11	8	8	6	2	2	4	7	8	10
Snowfall (in)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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 or the endangered distinction of a species.

Section 4 – Hazard Vulnerability Analysis

A hazard can be defined as a condition that has the potential to result in equipment or system failure that can result in human injury or death or damage to the environment. Hazards are divided into two categories: natural or technological. Natural hazards include earthquakes, wild fires, and floods; while technological hazards include transportation accidents, illegal disposal, and equipment failures during manufacturing, storage, transportation, and use of hazardous materials.

A risk assessment is the process of evaluating the degree of harm a hazard presents. Risk assessments are utilized in developing emergency response plans and procedures, designing and modifying safety systems, identifying needed resources, conducting training and exercises, and minimizing damage and liability.

Definitions for Hazard Prioritization

Magnitude

Physical and Economic Greatness of the 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 disaster and the effects of the disaster last

Factors to consider

- Length physical duration during emergency phase
- Length of threat to life and property
- Length of physical duration during recovery phase
- Length of effects on individual citizen and community recovery
- Length of effects on economic recovery, tax base, business and manufacturing recovery, tourism, threat to tax base and threat to employment

Distribution

The depth of the effects among all sectors of the community and State

Factors to consider:

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

Area Affected

How large an area is physically threatened and potentially impaired or by a disaster risk

Factors to Consider:

- Geographic Area affected by primary event
- Geographic, physical, economic areas affected by primary risk and the 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
- Scientifically based predictions of an occurrence of an event in a given period of time.

Degree of Vulnerability

How susceptible is the population, community infrastructure and state resources to the effects of the risk.

Factors to Consider:

- History of the impact of similar events
- Mitigation steps taken to lessen impact
- Community and State 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

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

Hazard Ratings

Hazard Rating Definitions

Instructions Used for Hazard Rating

Give each hazard priority risk category listed as a rating from 0 to 3; 0 = no risk, 3 meaning a high risk.

0 = No hazard risk in accordance with the definitions for hazard prioritization.

1 = Low Risk in accordance with the definitions for hazard prioritization.

2 = Moderate Risk in accordance with the definitions for hazard prioritization.

3 = High Risk in accordance with the definitions for hazard risk prioritization.

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

a score of	15 - 24	could be considered HIGH priority risk
	9 - 14	could be considered MODERATE priority risk
	0 - 8	could be considered LOW priority risk

Prioritization of Hazard Matrix Results

Stakeholder Prioritization

The following list is hazards identified and prioritized based on stake-holder input, both public and government:

High Risk Priority Hazards

Earthquake	(Natural)
Transportation Accident	(Human-caused)
Transportation Loss	(Human-caused)
Wild land/Urban Fire	(Natural)
Weapons of Mass Destruction/Terrorism	(Human-caused)
Utility Loss/Disruption/Substations	(Human-caused)
Water/Wastewater Disruption	(Human-caused)
Hazardous Materials Incidents	(Human-caused)
Aviation Disasters	(Human-caused)

Moderate Risk Priority Hazards

Severe Weather /Destructive Winds	(Natural)
Explosions	(Human-caused)
Economic Disruption	(Human-caused)
Floods	(Natural)
Civil Unrest	(Human-caused)

Low Risk Priority Hazards

Dam Failure	(Human-caused)
Special Events	(Human-caused)
Sinkholes	(Human-caused)
Volcanic Activity	(Natural)
Drought	(Natural)

High Risk Priority Hazards

Earthquake

Earthquake was rated a HIGH PRIORITY HAZARD for the City of Burbank.

The 1989 Loma Prieta Earthquake and the 1994 Northridge Earthquake were poignant reminders of the value of seismic safety-oriented planning and programs. While earthquake risk cannot be entirely eliminated, the disasters that they cause can be significantly reduced through the informed application of regulatory measures and land use approaches, effective disaster response planning, and public hazard awareness.

Since required as a state statute in 1971, in response to the San Fernando Earthquake, the City of Burbank has adopted successive and improved versions of the Safety Element (to the General Plan). The first interim Safety Element was adopted by the City Council in 1972 and subsequently modified with improved geologic and seismic studies in 1974. In 1983, Burbank adopted a separate Seismic Safety Element in keeping with state law at that time; a separate element dealing with seismic safety issues is no longer required. Sections 65302(g), 65303, and 8876 of the California Government Code now require each local government to maintain a comprehensive Safety Element that addresses a variety of hazards, both natural and urban, including seismic safety. Safety Elements, as dictated by the State of California, should include a discussion of the following seismic safety issues, where applicable:

- Seismic hazards including risks associated with ground shaking, surface fault rupture, and ground failure;
- Geologic hazards such as landslides and collapsible soils; and
- Flood and inundation hazards including structural failure of water storage facilities, and where appropriate, damages resulting from tsunami, seiche and flooding.

This section of the Safety Element focuses on an analysis and understanding of seismic hazards. It incorporates lessons learned from previous earthquakes as well as detailed seismic hazard studies conducted by the United States Geological Survey (USGS) and by the California Division of Mines and Geology.

The City of Burbank is located in seismically-active southern California. Several faults in the southern California metropolitan area have moved in historic time; undoubtedly these well-known faults will move again. Other less-known faults may also be capable of generating large earthquakes within a time span of concern to the City. To minimize or accommodate the destructive effect of earthquakes, planners and engineers need to know which faults are more likely to slip again, and what the likely results of such movement will be. The 1987 Whittier Narrows Earthquake, the 1989 Loma Prieta Earthquake in northern California and the 1994 Northridge Earthquake have reinforced the notion that if potential problems are identified through hazard mapping, and mitigated through prudent planning, Building Code enforcement, and expedient retrofitting and rehabilitation, the scope of an earthquake disaster can be reduced significantly.

The January 17, 1994, Northridge Earthquake occurred on a previously undetected fault and resulted in extensive damage and loss of life throughout the metropolitan area; gas and oil lines ruptured, major freeways were closed as a result of collapse or damage, water mains ruptured leaving thousands of people without water, and fires destroyed numerous structures. The City of Burbank

sustained minimal damage compared with adjacent communities. The City sustained more damage from the 1971 San Fernando Earthquake. Only 13 structures (four commercial, six single family homes and three multi-family apartment buildings with 36 units) were uninhabitable and 31 structures had limited access, including one school and one airport structure. The City activated its Emergency Operations Center (EOC) less than one hour after the earthquake and by the next day went into recovery mode. This earthquake allowed the City and community the opportunity to test their earthquake preparedness skills and to find strengths and address the weaknesses of preparedness and response.

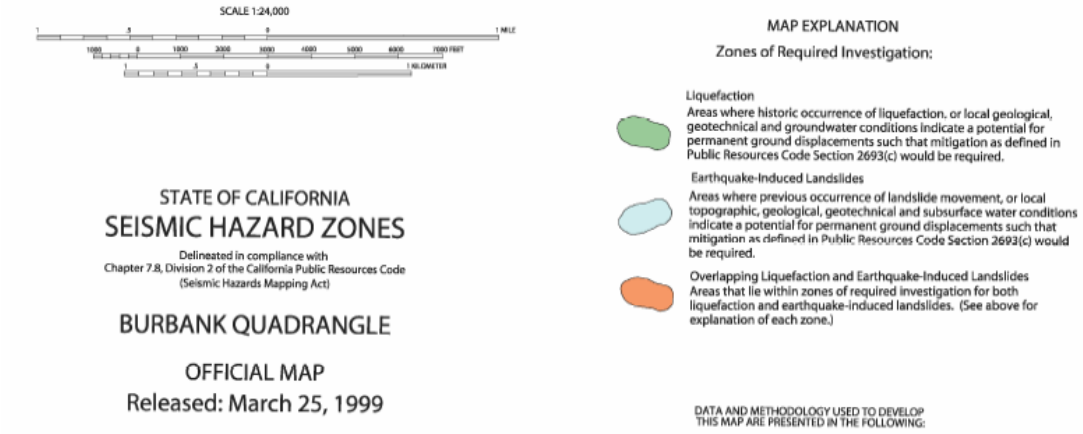
In January 1996, the State Department of Conservation's Division of Mines and Geology (DMG) released 16 Reconnaissance Seismic Hazard Maps covering the region most affected by the 1994 Northridge Earthquake, including the Burbank area. The hazards addressed by these maps are liquefaction and earthquake-triggered landslides. These preliminary maps are the first step in implementing the Seismic Hazards Mapping Act (SHMA) passed in response to the 1989 Loma Prieta Earthquake in the San Francisco Bay area. The purpose of this legislation is to reduce the threat to public health and safety and to assist local governments in minimizing future losses due to liquefaction, earthquake-induced landslides and other seismic hazards.

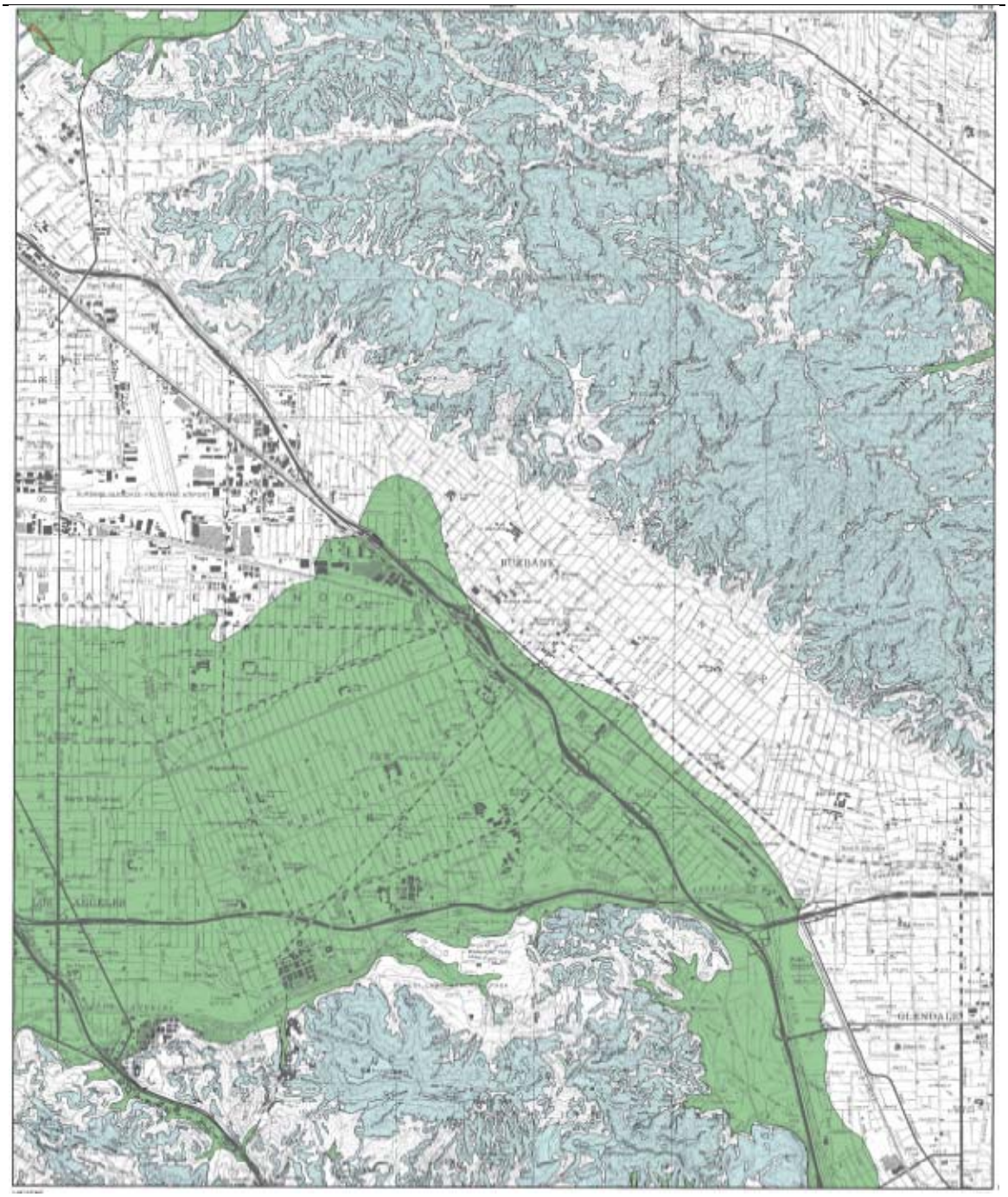
The SHMA requires the State Geologist to issue Seismic Hazard Zone Maps. The Act also requires cities and counties, once the maps are issued, to use the maps in land use planning and the permitting process by requiring site-specific geotechnical studies prior to permitting certain types of development. The Act also requires sellers of real property in a designated hazard zone to disclose this fact to potential buyers.

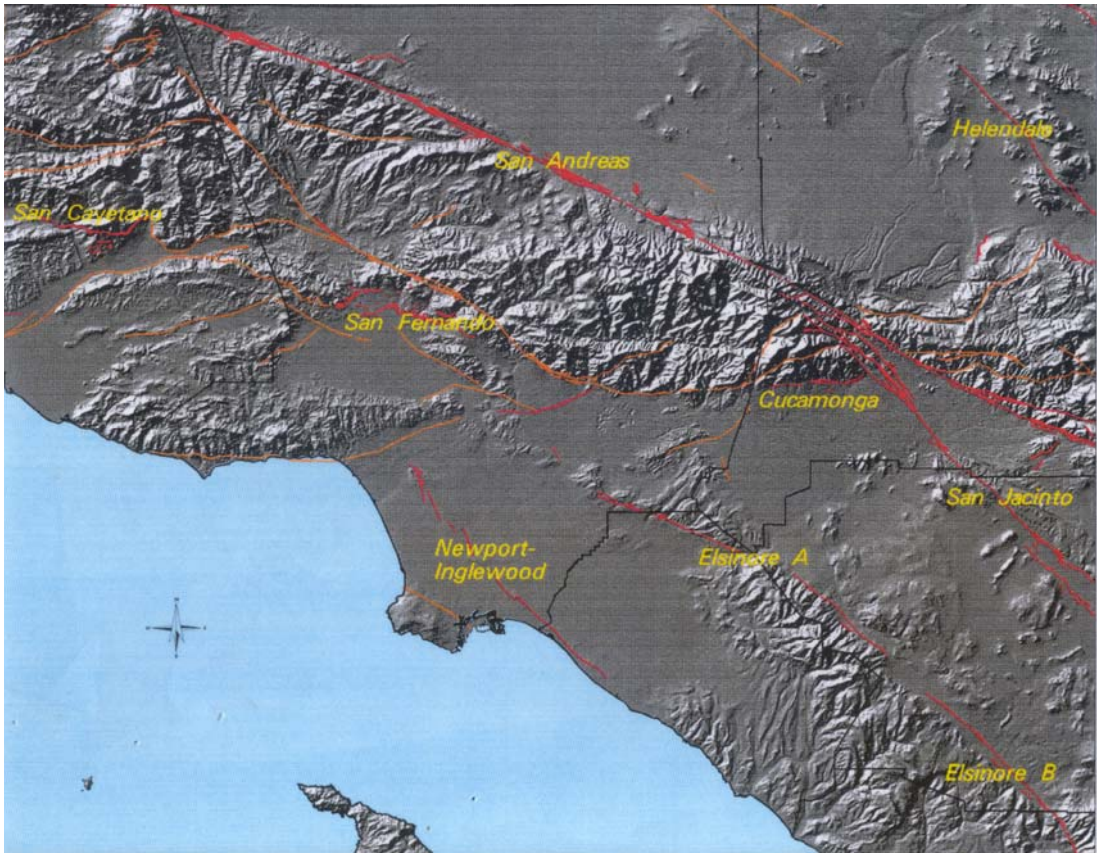
Until the official maps are ready for Burbank, however, the State Geologist has provided the City with an interim product (the Reconnaissance Seismic Hazard Map) that depicts areas where geotechnical site investigations should be conducted prior to initiating sensitive, high-risk construction and development projects. Cities and counties must regulate certain types of development within the designated hazard zones.

The Public Resources Code Section 2699 directs cities and counties to "take into account the information provided in available seismic hazard maps" when it adopts or revises the safety element of the general plan and in land use planning or permitting ordinances.

Burbank Quadrangle Seismic Hazard Zone Map




BURBANK
GLENDALE



Major Faults and Historical Seismicity in Southern California

Background Information and Terminology

The motion of the earth's continental plates (plate tectonics) results in stress accumulation along zones of weakness. Excess stress that has built up in a region as a result of these active tectonic forces may be released gradually, as creep, or released abruptly and violently along the weakest parts of the region. The abrupt release of stress (slip) is called an earthquake. During an earthquake, part of the released energy is used in overcoming the frictional resistance of the earth's materials along the fault surface, resulting in fault rupture, and the rest of the energy is carried away from the rupture area in the form of seismic waves. In small earthquakes, only a section of the causative fault may rupture, because the energy released is insufficient to overcome the frictional resistance of rocks away from the earthquake's source. In major earthquakes, the energy released is sufficient to break a large portion of the causative fault. In the worst-case scenario, that is, the maximum credible earthquake, the causative fault ruptures along its entire length.

Seismic waves propagating through the earth's crust are responsible for the ground vibrations normally felt during an earthquake. Seismic waves vibrate up and down and side to side at different frequencies, depending on the frequency content of the earthquake rupture mechanism, the distance from the earthquake source to a particular site, and the path and material through which the waves are propagating. As seismic waves travel through the earth's crust, their energy is lost due to the inelastic behavior of the ground motion, and due to scattering, diffraction and deflection as the waves cross

materials of different physical properties. The overall effect, known as attenuation, alters the form and frequency content of the seismic waves with distance away from the earthquake's source.

Ground shaking generally causes the most widespread damage in an earthquake. Strong ground motion can catastrophically damage vulnerable structures such as freeway overpasses and unreinforced masonry buildings. Ground shaking can also trigger a variety of secondary hazards such as liquefaction, landslides, soil subsidence, fire, dam failure and even toxic chemical releases. Structures straddling a causative fault will be severely damaged if the fault ruptures during an earthquake. The following discussions will more thoroughly address the hazards of strong ground motion, fault rupture and liquefaction.

A fault is an area of weakness in the earth's crust. The largest earthquake a fault is capable of generating is termed a maximum credible earthquake. This involves rupture of the entire length of the fault and has the lowest probability of occurring within the time frame of most development. The most probable earthquake to occur within a specific time frame of interest, for example within a 30 to 100 year period, is termed a maximum probable earthquake. Maximum credible and maximum probable earthquakes are measured in terms of magnitude (M).

Earthquakes are also normally classified as to severity according to their **magnitude** (M). In recent years most seismologists have abandoned the familiar *Richter scale* for determining the size of large earthquakes. The Richter scale estimates the magnitude of a quake by using a seismograph to measure seismic waves, the form of energy released by disruptions of rock deep within the earth. A three on the Richter feels like a large truck rumbling down the street; an eight is catastrophic. Richter magnitude is a logarithmic measure of the maximum motions of the seismic waves as recorded with a seismograph. *Moment magnitude*--an earthquake magnitude measurement very similar to the Richter measurement-measures the amount of energy released by the fault movement in relation to the fault area which broke. The magnitude of an earthquake depends on the length of the rupture on the fault. It is calculated by multiplying the area of the fault's rupture surface by the distance the earth moves along the fault. Scientists now prefer the more precise moment magnitude scale. The 1994 Northridge Earthquake had a magnitude of 6.8.

Earthquake Size Descriptions		
Descriptive Title	**Richter Magnitude (M)**	**Intensity Effects**
Minor Earthquake	1 to 3.9	Only observed instrumentally or felt only near the epicenter.
Small Earthquake	4 to 5.9	Surface fault movement is small or does not occur. Felt at distances of up to 20 or 30 miles from the epicenter. May cause damage.
Moderate Earthquake	6 to 6.9	Moderate to severe earthquake range; fault rupture probable.
Major Earthquake	7 to 7.9	Landslides, liquefaction and ground failure triggered by shock waves.
Great Earthquake	8 to 8+	Damage extends over a broad area, depending on magnitude and other factors.

Earthquake events occurring close to a point of reference, in this case the City of Burbank, are termed near-field earthquakes. The shaking resulting from a near-field earthquake is rough and jerky and is particularly damaging to single-story and other short buildings, and to electrical facilities. Far-field earthquakes exhibit a slow rolling motion that will last several seconds longer than that resulting from a near-field earthquake. An earthquake generating from the San Andreas fault would be a far-field

earthquake in the City of Burbank. The low-frequency ground motion associated with a far-field earthquake is generally more damaging to mid-rise and high-rise buildings and other large structures, as well as their nonstructural internal components and furnishings. Nonductile structures, such as unreinforced masonry buildings, regardless of whether it is a near-field or far-field earthquake, are generally much more susceptible to damage than ductile wood-frame buildings.

Faults are classified as active, potentially active, or inactive depending on the risk the fault poses to development or the amount of knowledge compiled for a particular fault. The State of California uses the geologic time scale as a yardstick to measure the risk of surface fault rupture as called for in the Alquist-Priolo Special Studies Zone Act of 1972. The probability of a large damaging earthquake occurring on a given fault generally decreases with age of the latest proven fault movement. This can be summarized as follows.

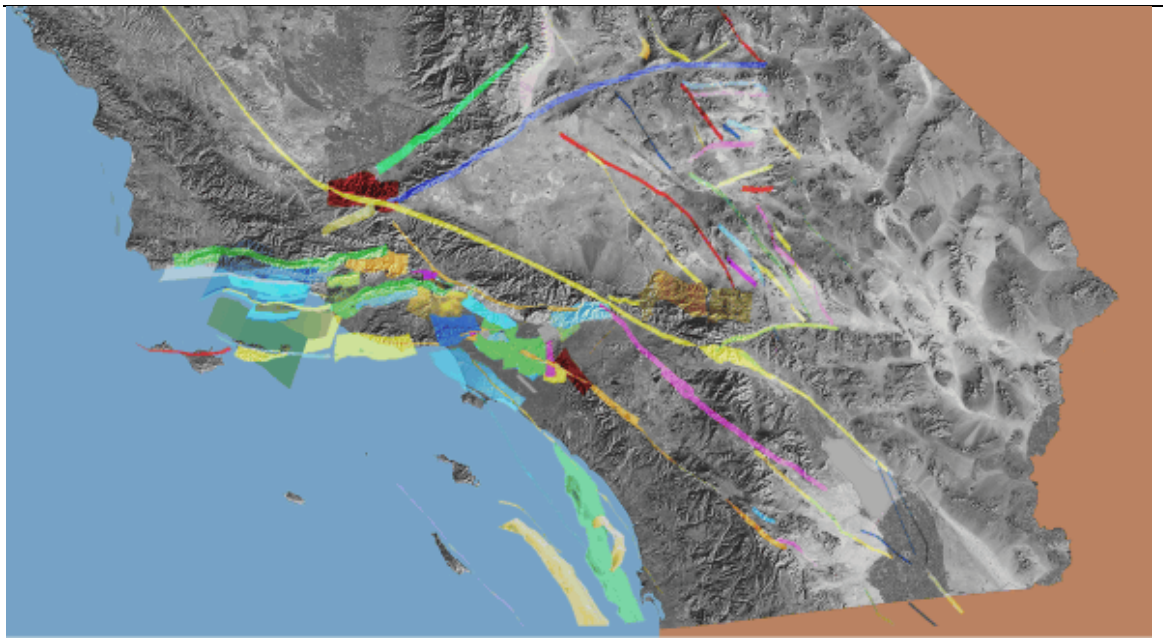
- Active Fault--A fault on which movement has been proven to have occurred within the last 11,000 years. Active faults have a high-risk of surface rupture. The Alquist Priolo Special Studies Zone (APSSZ) Act focuses on this risk category, which can be associated with a maximum credible earthquake. Smaller, maximum probable earthquakes occur more frequently on active faults.

- Potentially Active Fault--A fault which shows evidence of surface displacement during the last two million years, but for which it has not been proven whether or not it displaces sediments younger than 11,000 years. These faults have the next lowest probability of being the site of a damaging earthquake. Although maximum credible earthquakes on these faults are very unlikely, maximum probable earthquakes may occur during a time span of concern to urban planners, engineers and developers. Potentially active faults are considered in the design of critical facilities such as dams, fire stations, emergency operation centers, etc.

- Inactive Fault--A fault which has been proven by direct geologic evidence not to have moved in the last 11,000 years. This type of fault is thought to pose no risk to conventional development and most critical facilities. Such faults however are considered potential seismic sources in the design of nuclear power plants.

While the description of an earthquake size is usually expressed as a magnitude, an earthquake's destructiveness has commonly been measured as seismic intensity. A common intensity scale consists of 10 to 12 levels of shaking; the higher the number, the greater the damage. Seismic intensity scales have been developed by quantifying relative damage levels observed in past earthquakes. The intensity scale most often used is the Modified Mercalli (MM). Magnitude and intensity measures are discussed in more detail in the chart on the next page. It is a general description that depends not only on the size of the earthquake and the distance away from the earthquake source, but also on the quality of construction that has been damaged and the nature of local ground conditions.

	Modified Mercalli Intensity Scale
Numerical Code	**Description**
I	Not felt by people, except under especially favorable circumstances.
II	Felt only by persons at rest on the upper floors of buildings, some suspended objects may swing.
III	Felt by some people who are indoors, but may not be recognized as an earthquake. The vibration is similar to that caused by the passing of light trucks. Hanging objects swing.
IV	Felt by many people who are indoors and by a few outdoors. At night some people are awakened. Dishes, windows and doors are disturbed; walls make creaking sounds; stationary cars rock noticeably. The sensation is like a heavy object striking a building; the vibration is similar to that caused by the passing of heavy trucks.
V	Felt indoors by practically everyone, and by most people outdoors. The direction and duration of the shock can be estimated by the people outdoors. At night, sleepers are awakened and some run out of buildings. Liquids are disturbed and sometimes spilled. Small, unstable objects and some furnishings are shifted or upset. Doors close and open.
VI	Felt by everyone. Many people are frightened and run outdoors. Walking is difficult. Small church bells ring. Windows, dishes and glassware are broken. Liquid spills. Books fall from shelves and furniture is moved or overturned. Poorly built buildings may be damaged and weak plaster will crack.
VII	Causes a general alarm. Standing upright is very difficult. Persons driving cars also notice the shaking. Damage ids negligible in buildings of very good design and construction, slight to moderate in well-built ordinary structures, and considerable in poorly built or designed structures. Some chimneys are broken. Interiors of buildings and furnishings are damaged considerably. Architectural ornaments such as fountains, statues, and gargoyles are damaged. Small slides occur along sand or gravel banks of water channels; concrete irrigation ditches are damaged. Waves form on water surfaces and muddy bottoms become agitated.
VIII	General fright or panic. Steering cars is difficult. Damage is slight in specifically designed earthquake-resistant structures, considerable in well-built ordinary buildings, poorly built or designed buildings experienced partial collapse. Numerous chimneys fall; the walls of frame buildings are damaged; interiors are heavily damaged. Frame houses that are poorly bolted move off their foundation. Decayed pilings are broken off. Trees are damaged. Cracks appear in wet ground and steep slopes. Changes in water flow and temperature in springs and wells are noticed
IX	Panic is general. Interior damage is considerable in specially designed earthquake-resistant structures. Well-built ordinary buildings are severely damaged with partial collapse. Frame structures are thrown out of plumb or shifted off foundations. Unreinforced masonry buildings collapse. The ground cracks conspicuously and some underground pipes are broken. Reservoirs are severely damaged. Reservoirs are seriously damaged.
X	Most masonry and many frame structures are destroyed. Specially designed earthquake-resistant structures may suffer serious damage. Some well-built bridges are destroyed. Dams, dikes, and embankments are seriously damaged. Large landslides are triggered by the shock. Water is thrown onto banks of canals, rivers and lakes. Sand and mud are shifted horizontally on beaches and flat land. Railroad rails are bent slightly. Many buried pipes and conduits are broken.
XI	Few, if any masonry structures remain standing. Other structures are severely damaged. Broad fissures, slumps and slides develop in soft or wet ground. Underground pipelines and conduits are put completely out of service. Railroad rails are severely bent.
XII	Damage is total, with practically all works of construction severely damaged or destroyed. Waves are observed on ground surfaces. All soft or wet ground is greatly disturbed. Heavy objects are thrown into the air and large land masses are displaced.



This map shows the 3-dimensional structure of major faults beneath Southern California. Vertical faults such as the San Andreas (yellow band from top left to bottom right) are shown as a thin strip. Faults that are at an angle to the surface are shown as wider ribbons of color. Areas that seem to have few faults can still experience strong shaking from earthquakes on unmapped faults or from large earthquakes on distant faults

Seismic Hazards Analysis

Studies conducted by the California Division of Mines and Geology, the U.S. Geological Survey, and other agencies and private institutions have been reviewed and are summarized in this section to address the seismic hazards of most concern to the City of Burbank. These seismic hazards include ground shaking, fault rupture and liquefaction. This section discusses, in a general way, how and why earthquake hazards occur, and how seismic hazards are modeled and quantified for prediction and planning purposes.

There are numerous active and potentially active faults in southern California which, in the event of an earthquake, have the potential for generating strong ground motions in Burbank. A far-field earthquake on one of the more distant faults, such as the San Andreas, would be less damaging in Burbank than a near-field earthquake on a closer fault such as the Verdugo Fault. Some of the more distant faults, however, have a higher probability of occurrence, potentially causative faults in the region, and the probable effects on Burbank of a maximum credible earthquake on each fault. The major known faults in the region are listed below; four have been selected for special analysis due to the fact that they are near-field sources, most with relatively high probabilities of generating maximum credible earthquakes in 100 years (Verdugo, San Fernando, Hollywood and Sierra Madre faults).

Major southern California faults with a potential for impacting the City of Burbank are the following:

- San Andreas Fault. The San Andreas Fault is considered to be the major geological structural feature of southern California; the San Andreas Fault zone is approximately 27 miles from the

City. A catastrophic earthquake having a Richter magnitude of 8.3 on the southern central portion of this fault is likely before the end of the 20th century and is estimated to have a current annual probability of occurrence between two and five percent.

- Newport-Inglewood Fault. This fault is considered the second most active fault in California, located about 12.5 miles southwest of the Civic Center. This fault is capable of producing earthquakes in a range of 6.3 to 7.5 magnitude.

- Sierra Madre-San Fernando Fault System. This fault system stretches from Cajon Pass in San Bernardino County to Ventura. It includes the Cucamonga, Sierra Madre, San Fernando and Santa Susanna faults.

- Sierra Madre Fault. This fault extends along the base of the San Gabriel Mountains between Sunland and La Crescenta Flintridge. This fault is estimated to generate a maximum credible earthquake of magnitude 6.4, generating maximum seismic intensities of 8.5 to 9.0 MM. This earthquake fault is least likely to cause liquefaction related damage. There is the probability of 2.5 percent that an earthquake would occur on this fault within the next 100 years. The principal hazard to Burbank is ground shaking that would be similar to that which occurred in 1971.

- San Fernando Fault. There is a 39 percent probability that within the next 100 years a magnitude 6.5 earthquake could occur on this fault. This fault is classified as an active fault and is capable of generating an earthquake with the shaking intensity of 7.5 to 8.0 MM, similar to that experienced during the 1971 Sylmar Earthquake. This fault is located to the northwest of the City. Damage resulting from a maximum credible earthquake is expected to be moderate and probably less than that experienced during the 1971 Sylmar earthquake. This can be attributed to better construction quality, improved disaster response planning and seismic rehabilitation which has reduced the City's vulnerability.

- Hollywood Fault. The Hollywood Fault is estimated to be capable of generating a magnitude 6.4 at a probability of 6.2 percent within the next 100 years. This fault is a reverse fault and therefore would result in a maximum credible earthquake that would have higher than anticipated accelerations and intensities resulting in a 10 to 10.5 MM. An earthquake on this fault would impact the southern part of the City. The liquefaction-prone area along the Los Angeles River would be subject to 10 to 10.5 MM that would result in liquefaction damage. Mid-rise and high-rise buildings in the Media District would be exposed to the effects of site amplification. The seismic intensities drop gradually across the City to the northwest, with most of the urbanized section of Burbank experiencing intensities greater than 9.0 MM. During the 1971 earthquake, buildings constructed of pre-cast concrete suffered significant structural damage from such levels of ground motion, especially in areas prone to liquefaction.

- Verdugo Fault. The Verdugo Fault traverses Burbank through the Verdugo Mountains located in the northeastern section of the City. This Fault is located along the lower slopes of the Verdugos and in the alluvium just south of these mountains. It is generally considered as the main surface of movement along which the mountains have been raised to their present position. This fault has also been mapped on the surface in northeastern Glendale and at various other locations in Burbank. The fault branches into Stough Canyon (see Plate 1). The Verdugo Fault has a low probability of 6.2 percent of delivering a magnitude 6.7 (8-10 MM) maximum credible earthquake within the next 100 years. The potential effects of an earthquake with this intensity would be the destruction of most masonry and frame structures located on or adjacent the fault. Underground pipelines would be seriously damaged. Large landslides could occur, well-built bridges destroyed and rails would be bent slightly. Destruction of the Thompson Memorial Hospital, Central Library, Fire Station 11 headquarters,

City Hall and Municipal Services Building and much of the downtown Burbank area could occur if a quake should occur on this fault.

- Raymond Fault. The Santa Monica Raymond Hill Fault is located six miles from the Burbank Civic Center and is capable of producing a 7.5 magnitude maximum credible earthquake. There is a very low probability (3.1 percent) that an earthquake on this fault will occur within the next 100 years.

- Unnamed Faults. These faults are part of a poorly understood system of basin faults. They may be active or potentially active.

Probabilistic and Deterministic Approaches to Earthquake Hazard Analysis

There are two analytical approaches to earthquake hazard analysis: the deterministic and the probabilistic. The traditional approach has been deterministic. Seismic parameters are determined for a given site based on the size of the maximum credible earthquakes expected on selected active and potentially active faults in the area. As stated previously, the maximum credible earthquake is the largest earthquake a fault is capable of generating, based on historical experiences with similar faults, fault lengths, and earthquake magnitudes.

The deterministic approach, therefore, gives the worst-case scenario, rather than evaluating the hazard of smaller but more frequent earthquakes. This method does not take into account at all the likelihood of a maximum credible earthquake occurring. Although the worst-case results of a deterministic analysis may be difficult to apply in real world planning situations, this method has been favored in the past because it is straightforward, disregarding uncertainties inherent to seismic parameters addressed in a probability analysis.

The probabilistic method addresses the questions of how often and how strongly the ground will shake when considering all possible earthquakes in the area. For a probabilistic analysis, the maximum probable earthquake is arbitrarily defined as an earthquake that may occur within 100 years. In certain cases, however, it may be important to use a time period of say 30 to 50 years to best represent the designed lifetime or importance of the structure being considered. A probabilistic analysis does not mean to imply that a maximum credible earthquake will not happen, only that the probability of its occurrence during the lifetime of the structure is a function of the life of the structure and the frequency of occurrence of that earthquake. A measure of risk is implicitly assumed.

Structural engineers and planners use the results of such a probabilistic analysis to define the level of ground motion acceptable (risk is implicit) for a given structure. Critical facilities can then be designed or retrofitted for that ground motion level which, within economic reason, best approximates the strongest predicted ground motion. The results of the probabilistic method can only be considered realistic if the return period of earthquakes of different magnitudes on potentially causative faults is known with sufficient certainty.

Ground Shaking Hazard

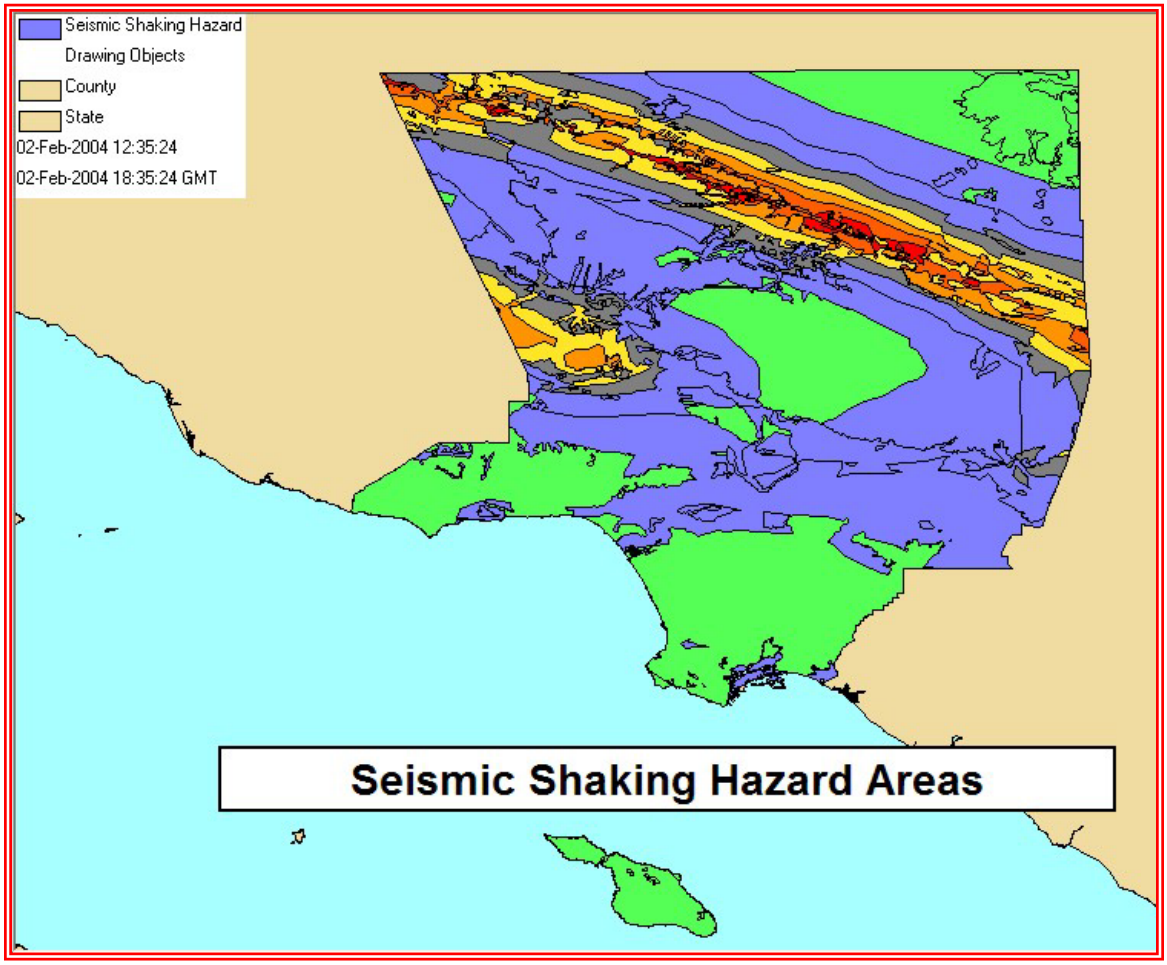
Ground shaking refers to the ground vibrations produced by an earthquake. Many variables, other than distance from the earthquake source, affect the spatial distribution and character of ground motion that results from an earthquake. These variables include the size of the earthquake, the type of fault (e.g., strike-slip or thrust), the orientation of the rupture surface, the basin geometry and topography, and the subsurface and near-site geological conditions. Historical records show that acceleration amplitudes, frequency composition, and duration of both the horizontal and vertical components of ground vibration may vary widely in the Burbank area. Ground motion at the surface is influenced mostly by the interaction between the seismic waves and the local geology and site conditions.

Because of the many uncertain variables involved, predicting earthquake ground motion from purely theoretical models is not possible. However, empirical equations that describe the variation of certain earthquake ground motion parameters as a function of earthquake magnitude and distance have been developed. These empirical equations, which are continuously being revised with new earthquake data, are currently used to predict the ground motion levels that may be generated by future earthquakes.

A knowledge of regional earthquake ground motion parameters, as they relate to structural damage in an area, is essential for earthquake hazard analysis. However, characterizing earthquake damage is very difficult because it requires predicting the interaction between ground motion and structures. A sophisticated model of the problem can be created, but it would be difficult, expensive, time consuming, and for most projects, not warranted.

Loma Prieta Earthquake in northern California had a magnitude of 7.1. Because size classification are based on a logarithmic scale, a Magnitude 8 earthquake is not twice as big as a Magnitude 4 earthquake, but rather 10,000 times larger. Earthquakes have only one magnitude, but they have several intensities that generally decrease with increasing distance away from the source. Although both magnitude and seismic intensity scales are used in this report, seismic intensities best characterize earthquake hazards for the purposes of planning and decision making.

Response spectra values are most useful for engineering design purposes where accurate seismic parameters are necessary to predict realistic values of ground motion. Response spectra represent the actual amplitudes and frequency contents of the seismic waves generated by an earthquake as they interact with a structure at a specific location. The response spectra values are used in dynamic motion analyses required in certain cases by the Uniform Building Code.



Composite earthquake intensity maps are based on intensities generated by overlapping the predicted ground motions from all active faults in the region. These maps depict the highest intensity distribution expected at every location in the area, and are most useful in identifying the regions where hazard mitigation measures are necessary.

Ground Shaking Hazard Analysis

The traditional practice of using equations to describe the variation of seismic parameters as a function of earthquake magnitude and distance is limited in application, unless the results of these analyses are used to generate strong ground motion maps. These maps are increasingly being used in urban planning to designate special land use zones in new developments, to establish special design standards for critical facilities, and to prioritize retrofitting of potentially hazardous buildings. Current research on predictive ground motion mapping emphasizes the use of relationships to relate site response, as determined from actual seismograph records, to geotechnical site conditions.

A simple approach to predict the interaction between ground motion and structures is to use seismic intensities to map ground motion. Seismic intensity maps are generated by subdividing ground conditions into relatively similar seismic shaking units, generally based on geologic rock units. Predicted ground motion parameters, expressed in units from the Modified Mercalli Scale are then assigned to each geologic unit to create on earthquake scenario map. Earthquake scenario maps are developed for a hypothetical earthquake generated at a specific location. These maps, if used together with inventories of potentially hazardous buildings, can help identify areas most likely to be severely damaged during an earthquake. The maps can also be used to identify areas where response capability operations, such as heavy rescue operations, will be vital in case of an earthquake.

Uses and Limitations of Seismic Intensity Maps

There are several advantages to using seismic intensity maps for safety planning and emergency response. Programs aimed at retrofitting potentially hazardous buildings can be coordinated so that the areas expected to experience the most damage in an earthquake are dealt with first. Using seismic intensity maps, the relative potential of certain areas to experience higher earthquake-related losses can be estimated. In addition, emergency response priorities and responsibilities can be appraised for different earthquake scenarios. Evacuation routes can be selected in advance so that in case of an emergency these can be implemented immediately. Search and rescue operations can be planned for, and practiced, in areas where these are most likely to be needed in the event of an earthquake.

There are, however, limitations to using seismic intensity ground motion maps. Seismic intensity maps are most accurate in predicting damage from high-frequency wave forms typical of a near-field earthquake. It is not yet possible to accurately model for far-field earthquake effects such as site amplification. These maps rely on empirical observations of past earthquakes to predict structural damage. Accurate knowledge of the quality and type of development in an urban area is necessary to increase the resolution of predictive damage from seismic intensity mapping programs.

Ground Shaking Hazard Management

The most effective seismic safety program for new developments is the enforcement of the seismic design provisions stated in the Uniform Building Code. Burbank, and most of southern California, is located in Seismic Zone 4 according to the ICBO Model Building Code adopted by state and local governments.

Conventional developments, such as residential tracts, are designed using peak ground accelerations and general lateral force procedures. These methods provide an adequate and economically-feasible safety margin for most conventional structures with simple plan design. The design of some structures, such as critical facilities, may require sophisticated seismic design methods, such as dynamic response spectra and time history analysis.

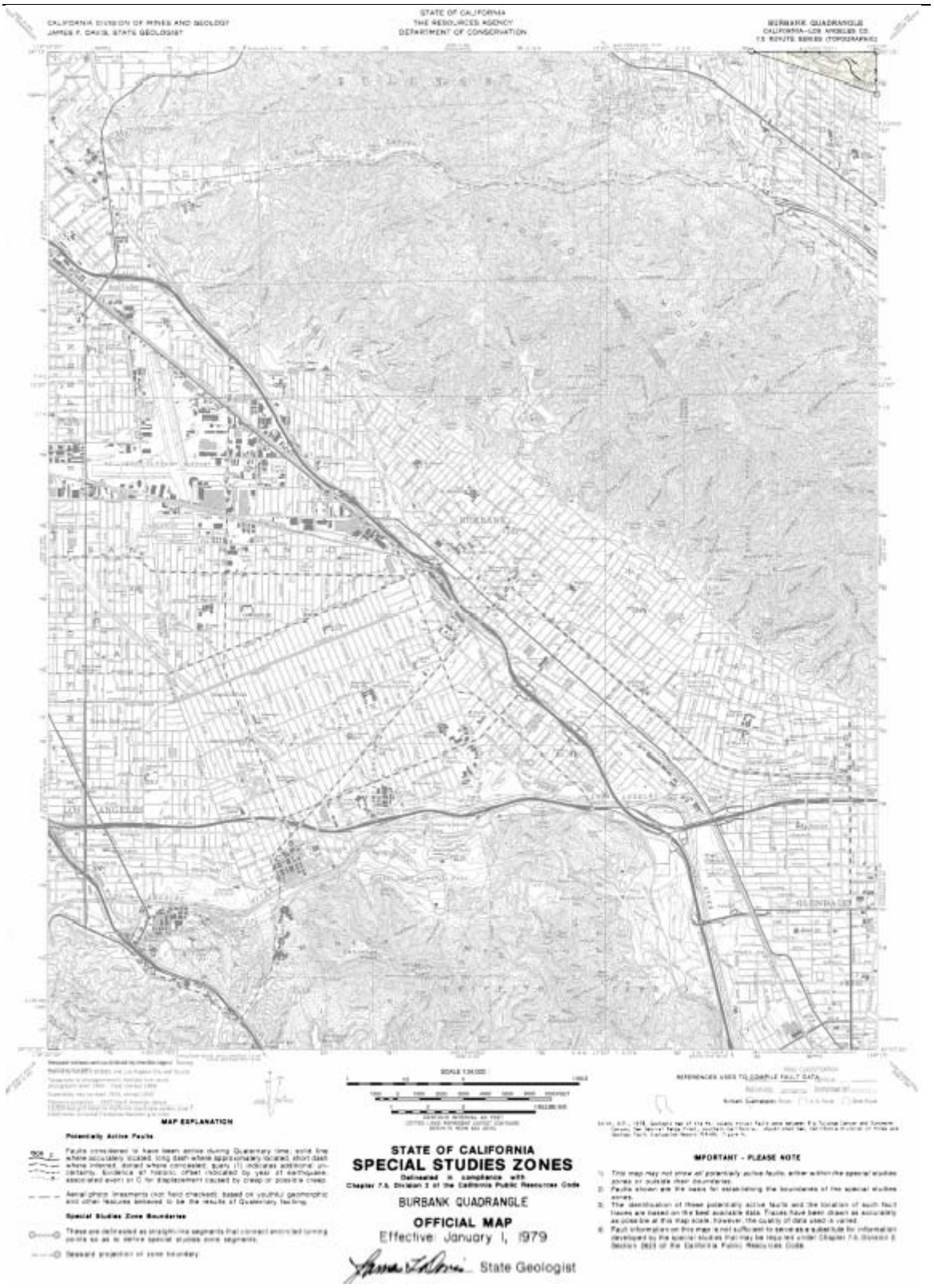
Fault Rupture Hazard

Earthquakes can cause large horizontal or vertical displacements of the ground surface along an active fault. Structures built across such a fault experience extensive damage in the event of a fault rupturing. To prevent this kind of seismic hazard from occurring, the State of California enacted the Alquist Priolo Special Study Zone (APSSZ) Act of 1972. Under this act, active faults and fault zones are identified and mapped throughout the state. In addition, development within an APSSZ must include geological studies prepared by a registered geologist, and building setbacks away from the fault must be defined and implemented.

Special criteria developed by the California Division of Mines and Geology to implement the APSSZ Act require evidence of proven or suspected displacements of Holocene age (0 to 11,000 years old) deposits to designate a fault as active. In addition to offset Holocene stratigraphy, youthful geomorphology and structural distortion of near-surface Holocene deposits are also considered strong evidence for inferring a high-risk of fault rupture.

Several faults in the County of Los Angeles have been designated as APSSZ by the California Division of Mines and Geology. Several other faults are currently considered potentially active. Potentially active faults, according to the APSSZ Act, are those which appear to have offset Pleistocene (two million years and younger) deposits, but have yet to be proven or disproved as having offset Holocene sediments. An important limitation of the APSSZ program is that mapping is regional. Consequently, certain faults may not be expediently designated as an APSSZ, and faults with ambiguous evidence of activity may never be designated an APSSZ. Because geologic relationships used to evaluate Holocene faulting can be obscured by the accumulation of stream deposits, erosion, or land sliding, an interpretation of risk can be problematic.

The designation of a fault as active, potentially active or inactive is largely dependent on the purpose and the requirements of the regulatory definition used. Although the Alquist Priolo definitions are generally applicable to conventional development, the site location and design of critical facilities usually require more stringent definitions of seismic activity.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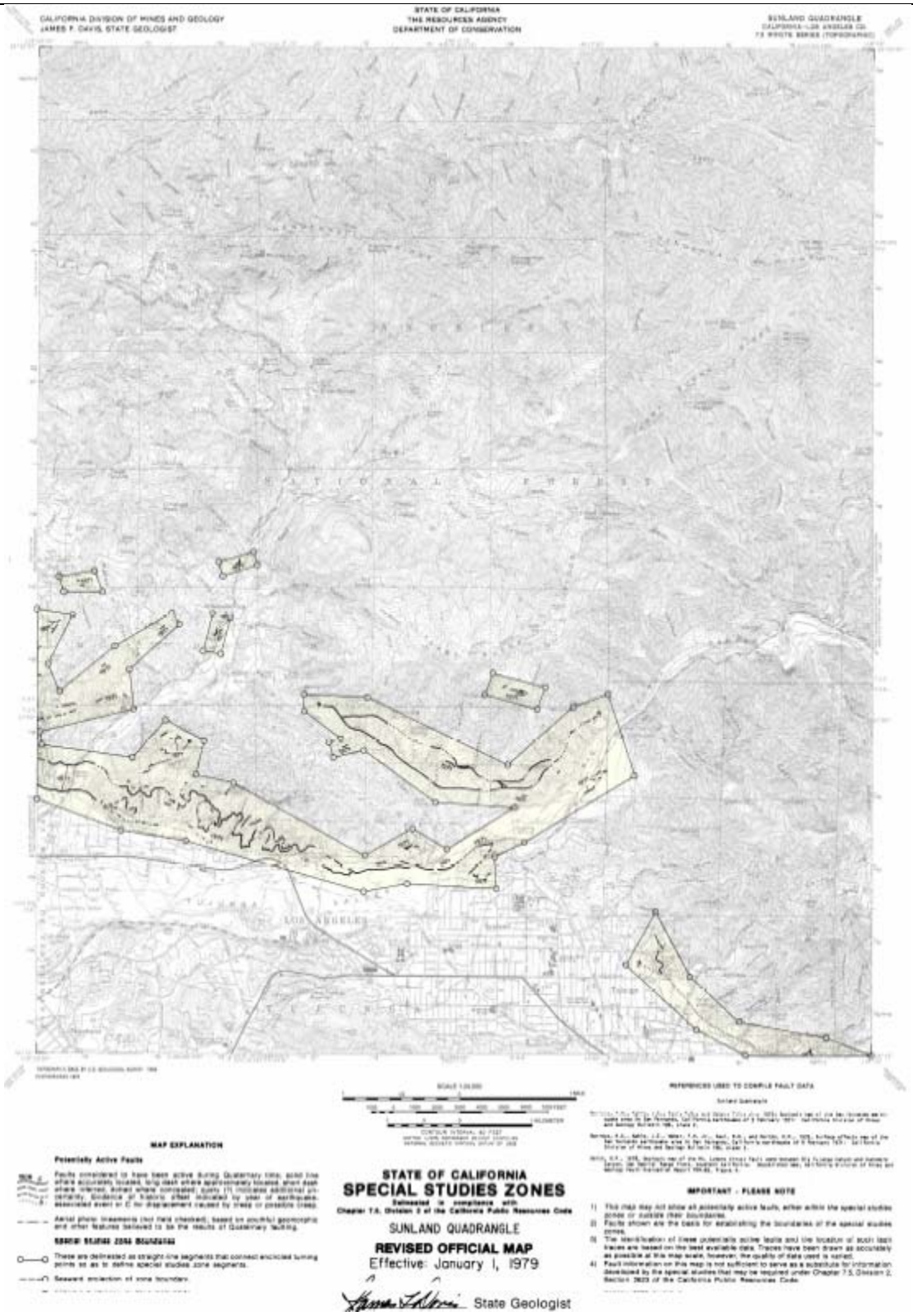
JAMES F. DAVIS, STATE GEOLOGIST
STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
BURBANK QUADRANGLE
CALIFORNIA—LOS ANGELES CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
MAP EXPLANATION
Potentially Active Faults
Special Studies Zone Boundaries
STATE OF CALIFORNIA
SPECIAL STUDIES ZONES
Delineated in compliance with
Chapter 7.5, Division 2 of the California Public Resources Code
BURBANK QUADRANGLE
OFFICIAL MAP
Effective: January 1, 1979
State Geologist
IMPORTANT - PLEASE NOTE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THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
SUNLAND QUADRANGLE
MAP EXPLANATION
Potentially Active Faults
STATE OF CALIFORNIA
SPECIAL STUDIES ZONES
SUNLAND QUADRANGLE
REVISED OFFICIAL MAP
Effective: January 1, 1979
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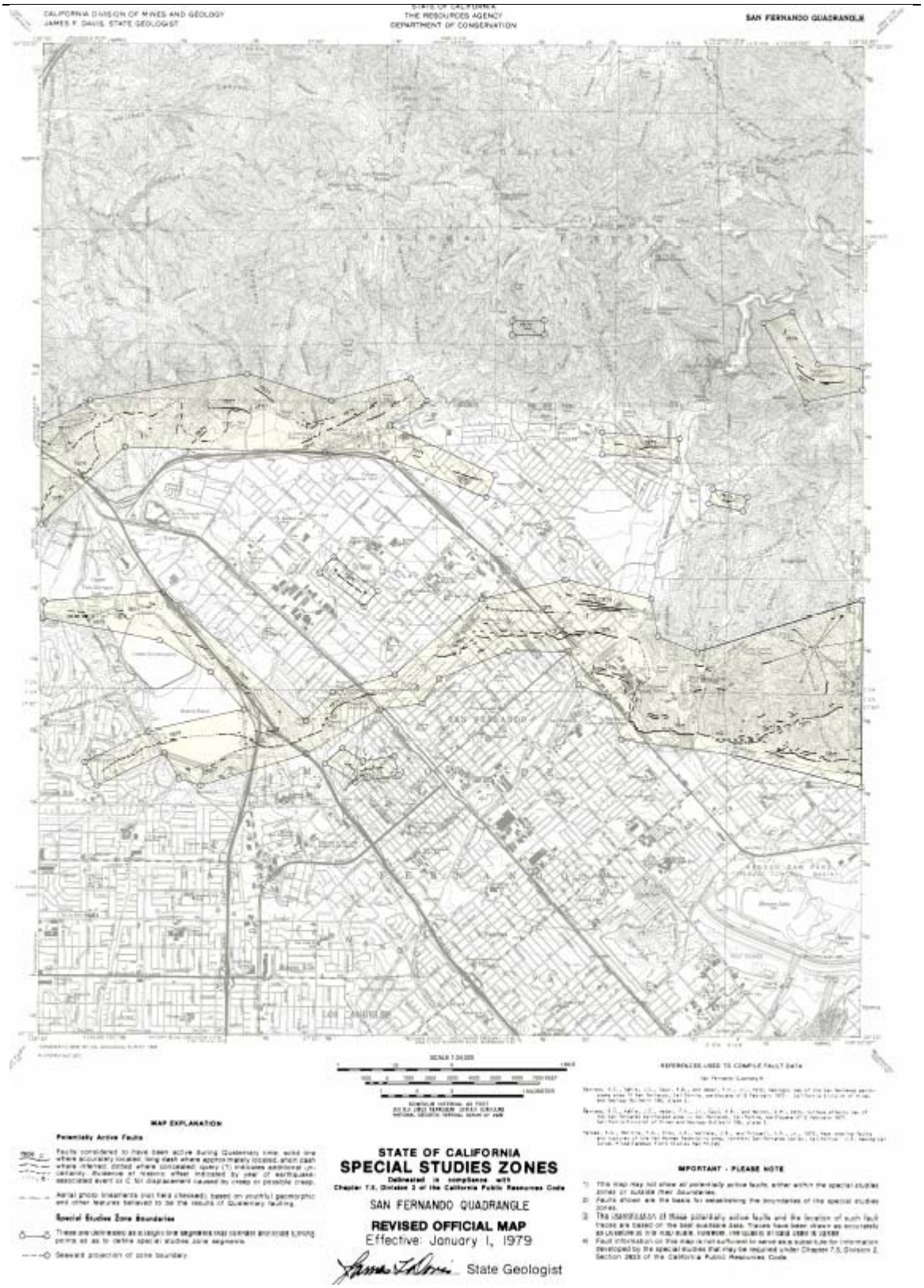
IMPORTANT - PLEASE NOTE



NOTE: These maps are placed on the preceding three pages illustration and reference purposes. Legible copies may be obtained through the California Department of Conservation Division of Mines and Geology.

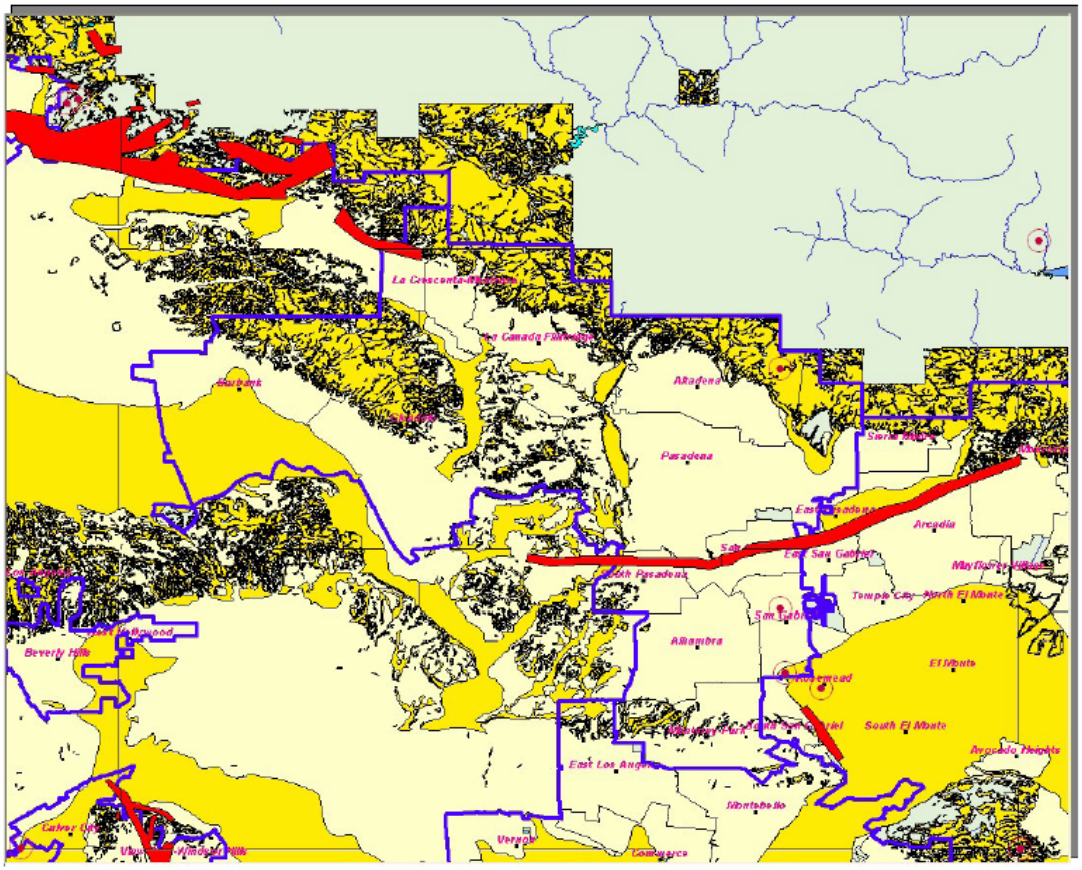
Verdugo Fault Zone Hazard Analysis

The California Division of Mines and Geology (CDMG) has documented probable fault activity in the Verdugo Fault Zone. Evidence for faulting in the Verdugo Fault Zone within the City limits ranges from well-defined scarps, to linear, discontinuous breaks in slope along the alluvial fan emanating from the Verdugo Hills. In addition, the U.S. Geological Survey has published several maps that show the Verdugo fault as active. Other faults, including the North Hollywood fault and several unnamed faults, have been identified within or near the City of Burbank limits.

The potentially active faults in the basin lie under a deep layer of alluvium and have been mapped from groundwater barriers and gravity data. Because similar, previously unrecognized and underestimated fault structures were the loci of hundreds of surface breaks along the San Fernando Fault Zone in the 1971 San Fernando Earthquake, the faults in Burbank merit special attention in future studies. Evidence of recency of movement along these faults in southern and southwestern Burbank may be concealed by the substantially thick stream sediments deposited by the Big Tujunga Wash. The surface rupture potential for each fault, as shown in Figure 10 on pages 49 and 50 has therefore been inferred. Future investigations should be aimed at more accurately evaluating the risk of each fault rupturing during an earthquake, although due to the thickness of cover and the developed nature of the City, these issues may never be resolved. The North Hollywood fault poses a credible surface rupture risk.

The Verdugo Fault Zone occupies approximately 1,200 acres. This zone can be expected to experience severe damage from ground shaking, ground deformation and differential settlement, as well as fault rupture in the event of an earthquake on the Verdugo fault. Most damage would be concentrated along the surface rupture trace of the fault.

Disaster Management Area C Earthquake Hazards (LA County GIS Data)



Los Angeles County

Disaster Management Area C

Earthquake Hazards

Legend

Historic Epicenter

Historic Major Fault Areas

Areas Vulnerable to Damage from Shaking

Disaster Management Area Boundaries

HAZUS Studies

HAZUS is a GIS-based regional loss estimation model developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of HAZUS is to provide loss estimates for earthquake, hurricane and flood hazards. These loss estimates may be used by local, state and regional officials to plan and stimulate efforts to mitigate risks from natural hazards and to prepare for emergency response and recovery.

The information provided in this report can be used to support mitigation planning through the assessment of risk and is associated with the earthquake hazard for the region. Similar reports are available for the hurricane and flood hazards. The first section provides earthquake hazard information. The next section provides information on assets associated with building, lifeline infrastructure, and critical facilities. The final section provides loss estimates associated with the earthquake hazard. The six appendices to the report provided additional information on the county's critical facilities.

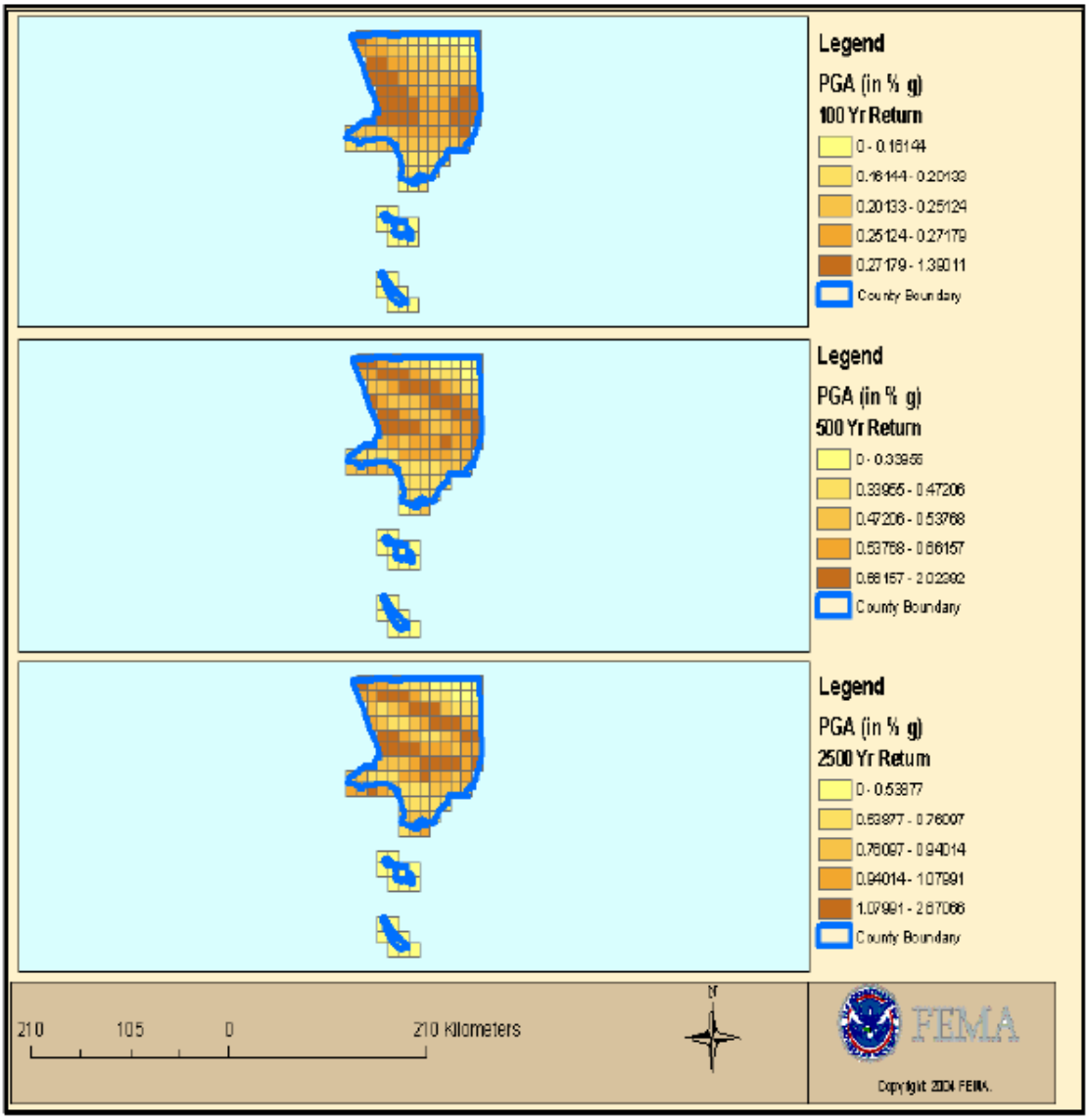
Los Angeles County, California covers an area of over 4,087 square kilometers and contains 2,054 census tracts (see Figure 1). The population of the county is over 9,519 thousand people (2000 Census data). There are an estimated 2,161 thousand buildings in the region with a building replacement value (excluding contents) of $522,562M. Approximately 98% of the buildings (and 0% of the building value) are associated with residential housing.

The City of Burbank continues to work with FEMA and the University of Southern California in an on-going effort to update and provide it's own HAZUS information

Probabilistic Earthquake Hazard

HAZUS contains probabilistic earthquake hazard information for the entire United States (USGS Open Field Report 02-420) and was used for the 2002 update of the National Seismic Hazard Map. This hazard information was developed by the United States Geological Survey (USGS); Golden, CO. Figure 2 provides earthquake hazard maps for 100, 500, and 2500 year return periods for Los Angeles County. Peak Ground Acceleration (PGA) is the intensity measure used in the maps.

Figure 2: Probabilistic Earthquake Hazard Maps
(PGA for 100, 500 and 2500 year return periods)



Scenario Earthquake Losses for Ten-County Southern California:

Estimated Building Damage Economic Loss for the Ten-County Southern California based on the USGS Scenario Earthquake Shake-Maps.

Scenario No.	Scenario Earthquake	M	Estimated Building Damage Economic Loss ($B)
S-1	Rose Canyon M6.9 scenario	6.9	14
S-2	Santa Monica M6.6 scenario	6.6	17
S-3	Newport-Inglewood M6.9 scenario	6.9	49
S-4	Palos Verdes M7.1 scenario	7.1	30
S-5	San Jacinto M6.7 scenario	6.7	7
S-6	Verdugo Fault M6.7 scenario	6.7	24
S-7	Coachella Valley M7.1 scenario	7.1	3
S-8	San Andreas southern rupture	7.4	18
S-9	Imperial M7.0 scenario	7.0	1
S-10	San Andreas 1857 rupture	7.8	17
S-11	Whittier M6.8 Fault scenario	6.8	29
S-12	Raymond Fault M6.5 scenario	6.5	17
S-13	Elsinore Fault M6.8 scenario	6.8	4
S-14	San Joaquin Hills	6.6	14
S-15	Puente Hills scenario	7.1	69
S-16	North Channel Slope scenario	7.4	4

Each of these faults (red arrows) are known to be a threat to the City of Burbank. The HAZUS study depicted scenarios for these faults and are shown on the following pages:

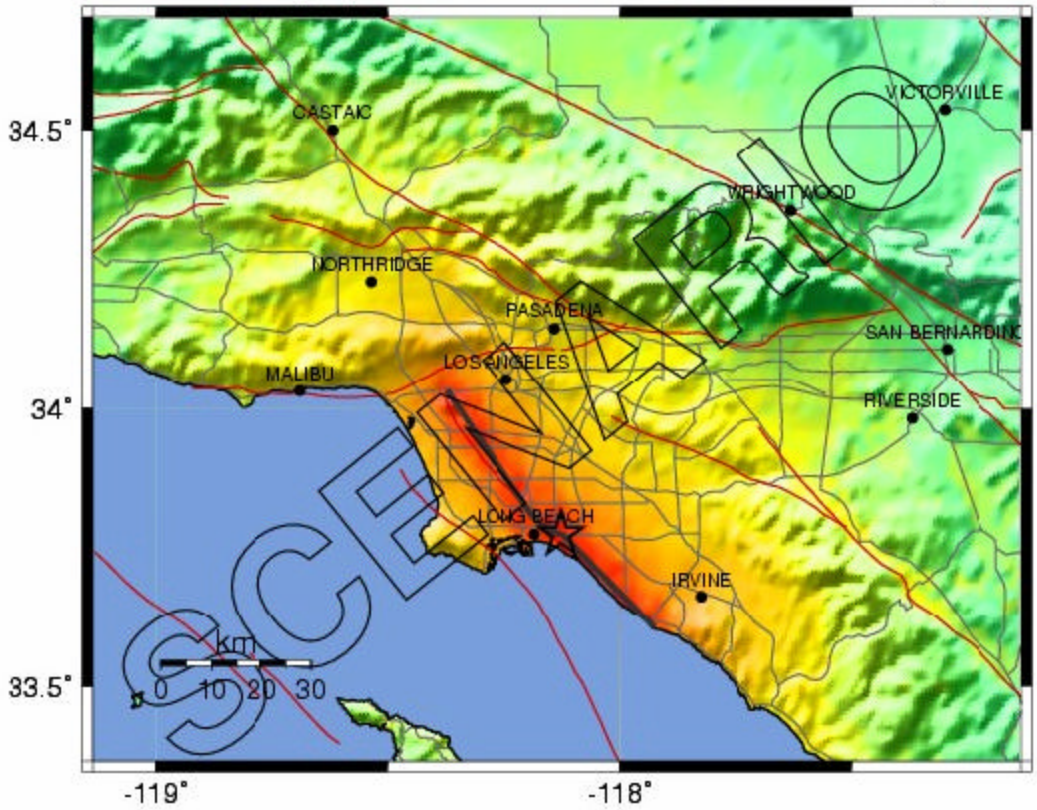
SCENARIO: S-3

Newport-Inglewood M6.9 Scenario

-- Earthquake Planning Scenario --

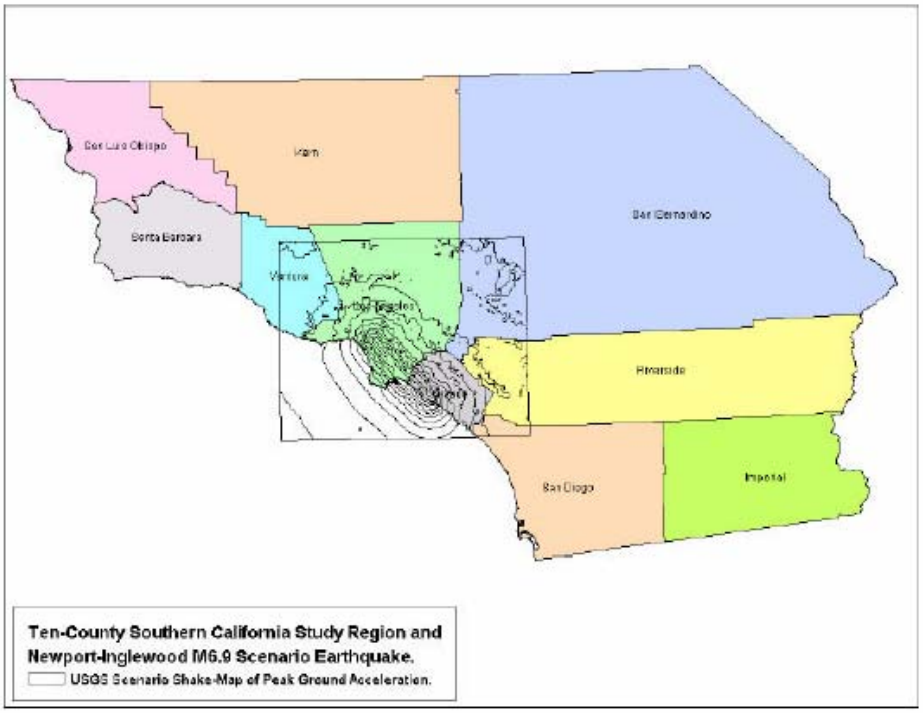
Rapid Instrumental Intensity Map for Newport-Inglewood M6.9 Scerario

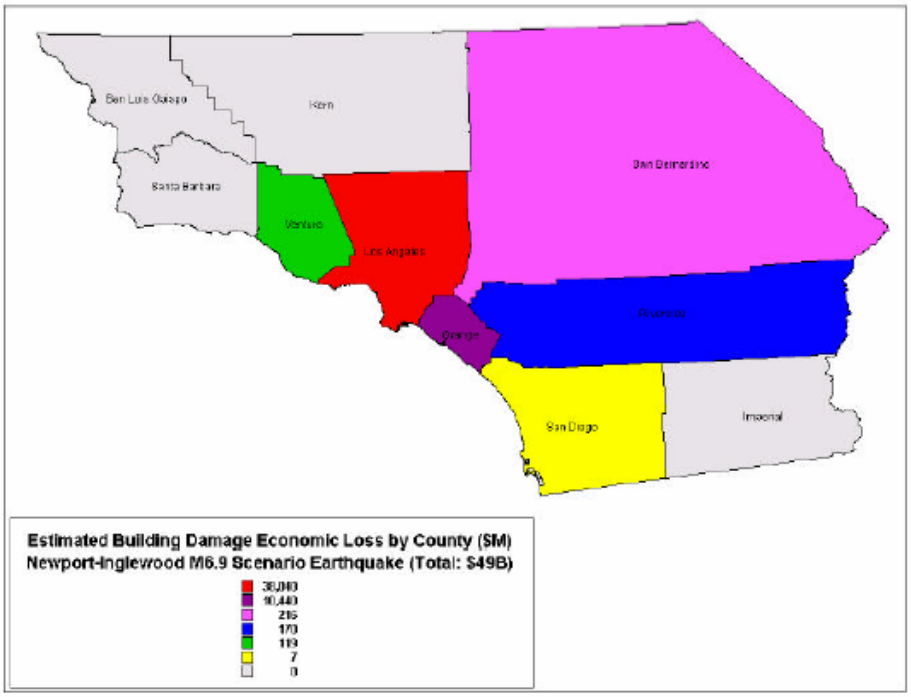
Scenario Date: Fri Aug 3, 2001 05:00:00 AM PDT M 6.9 N33.78 W118.13 Depth: 5.0km

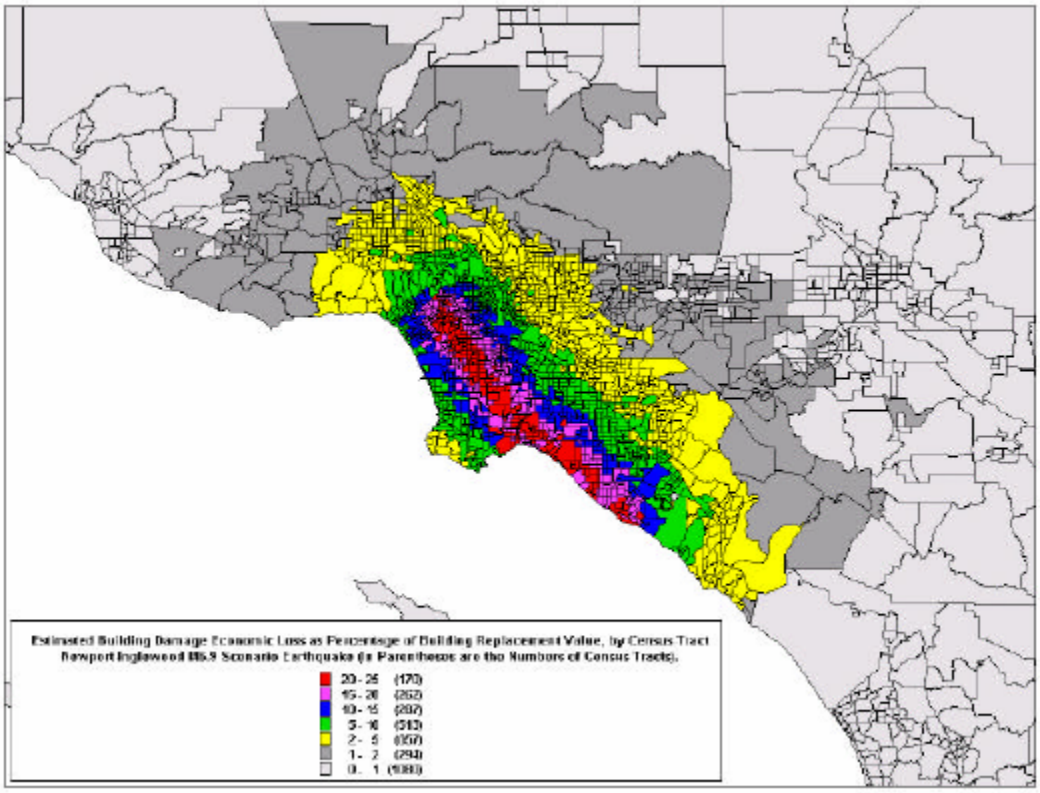


PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:01:27 PM PDT

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
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)
38,040
10,440
216
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 (207)
5- 10 (510)
2- 5 (557)
1- 2 (294)
0- 1 (938)

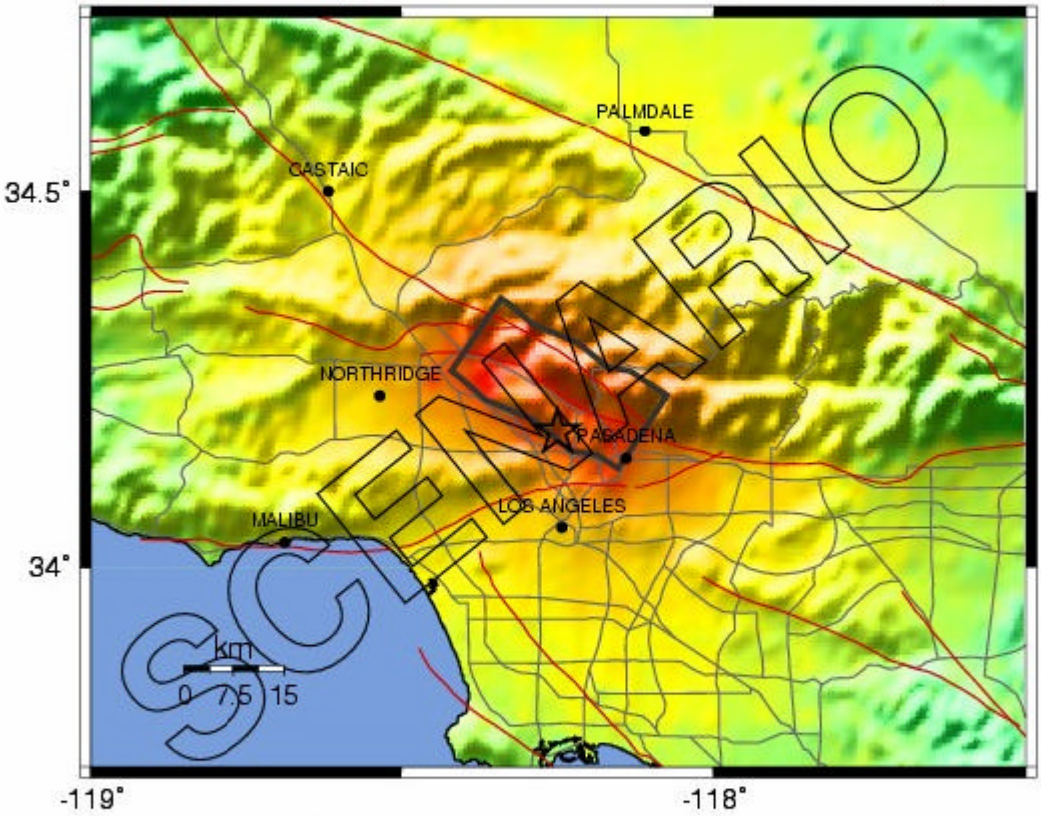
SCENARIO: S-6

Verdugo Fault M6.7 Scenario

-- Earthquake Planning Scenario --

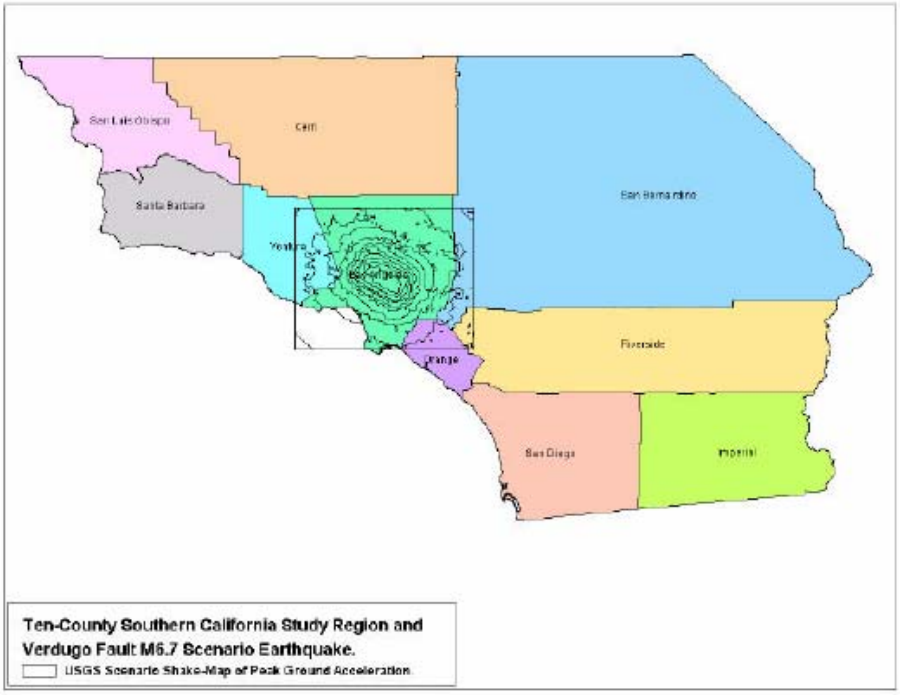
Rapid Instrumental Intensity Map for Verdugo Fault M6.7 Scenario

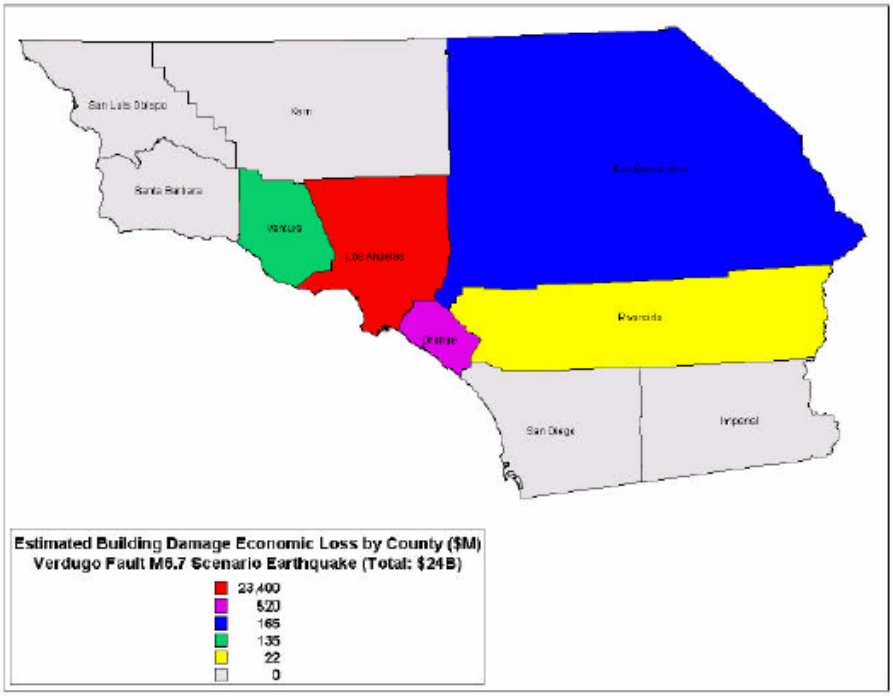
Scenario Date: Tue Oct 30, 2001 04:00:00 AM PST M 6.7 N34.18 W118.25 Depth: 6.0km



PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:40:13 PM PDT

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+


Ten-County Southern California Study Region and
Verdugo Fault M6.7 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration


Estimated Building Damage Economic Loss by County ($M)
Verdugo Fault M6.7 Scenario Earthquake (Total: $24B)
23,400
520
165
135
22
0

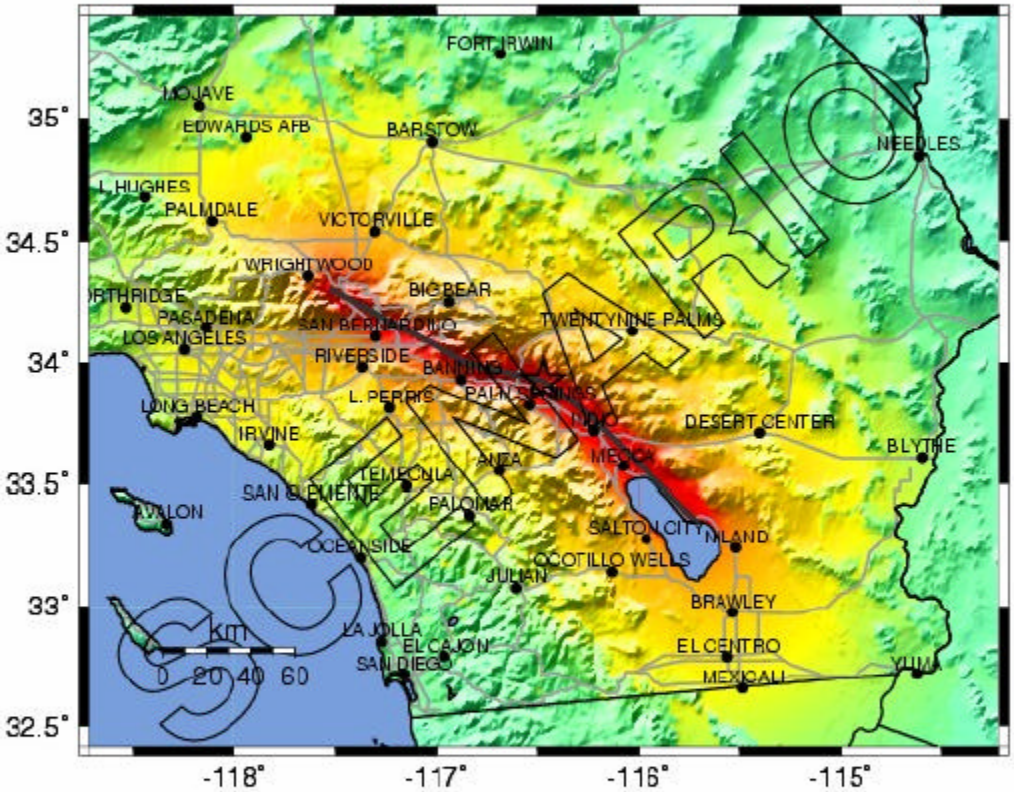
SCENARIO: S-8

San Andreas southern rupture

-- Earthquake Planning Scenario --

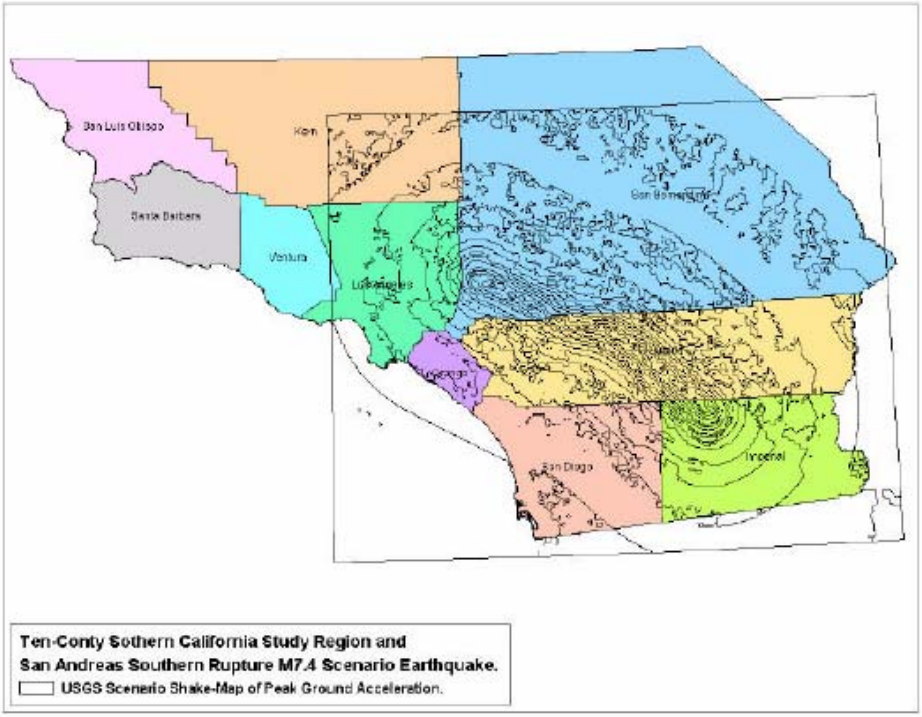
Rapid Instrumental Intensity Map for San Andreas southern rupture Scenario

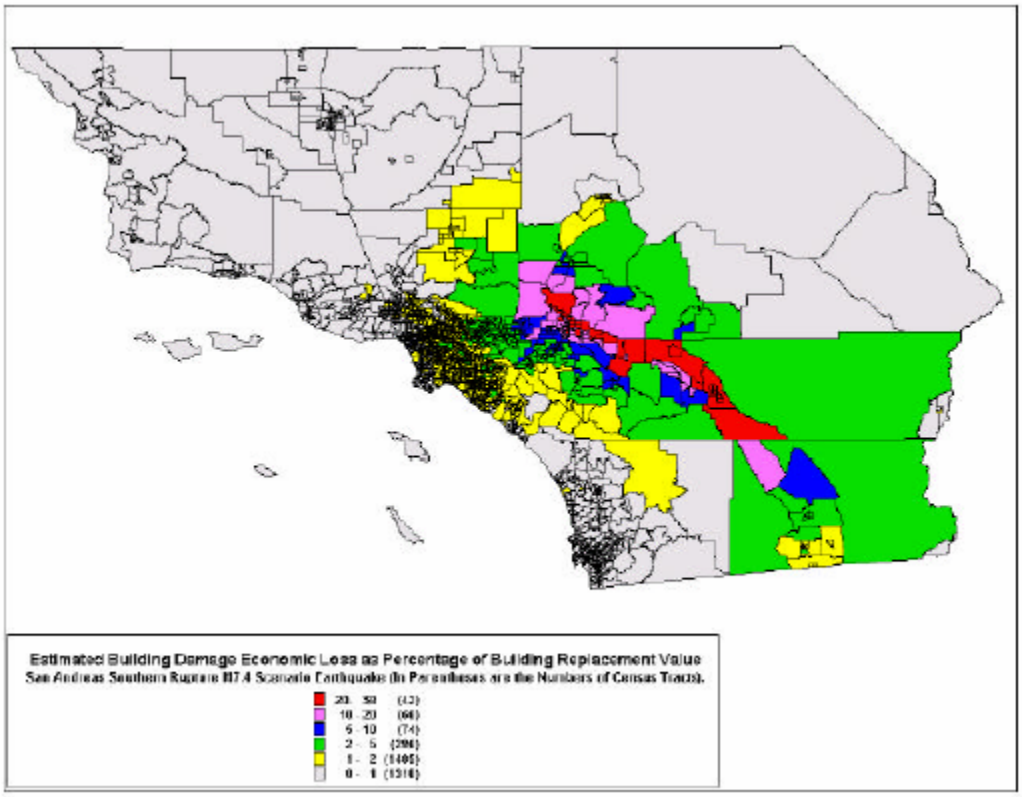
Scenario Date: Wed Nov 14, 2001 04:00:00 AM PST M 7.4 N33.92 W116.47 Depth: 10.0km



PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:23:34 PM PDT

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
San Bernardino
Los Angeles
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.


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 (296)
1 - 2 (1405)
0 - 1 (1516)

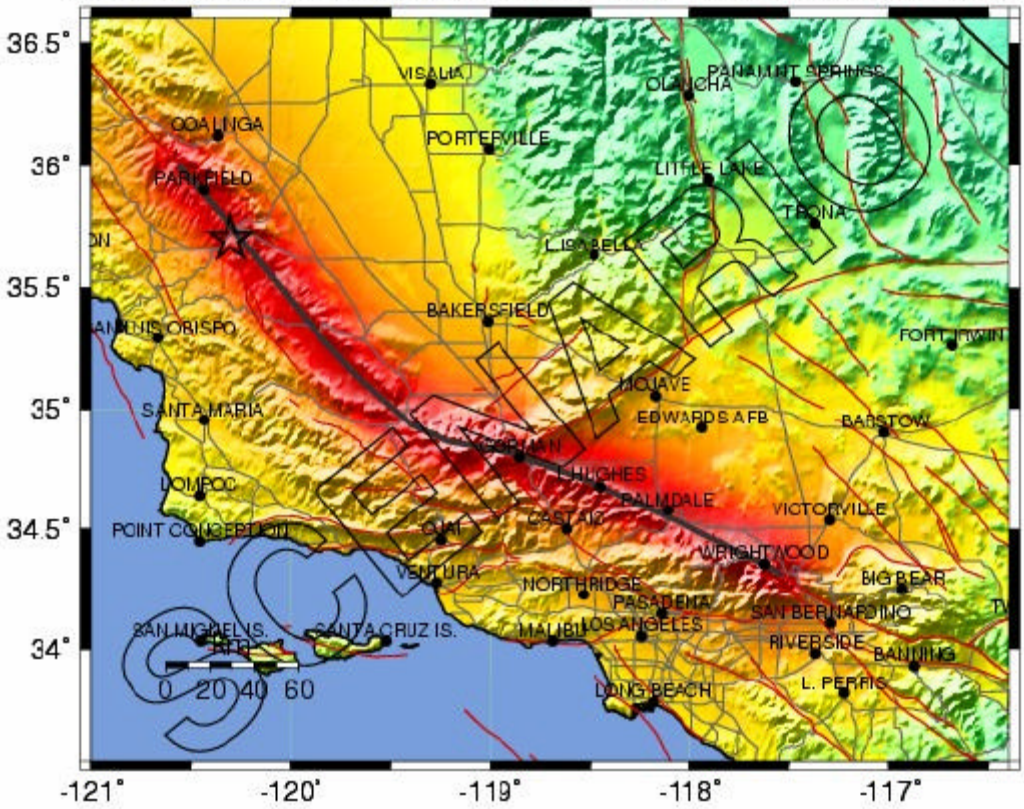
SCENARIO: S-10

San Andreas 1857 rupture

-- Earthquake Planning Scenario --

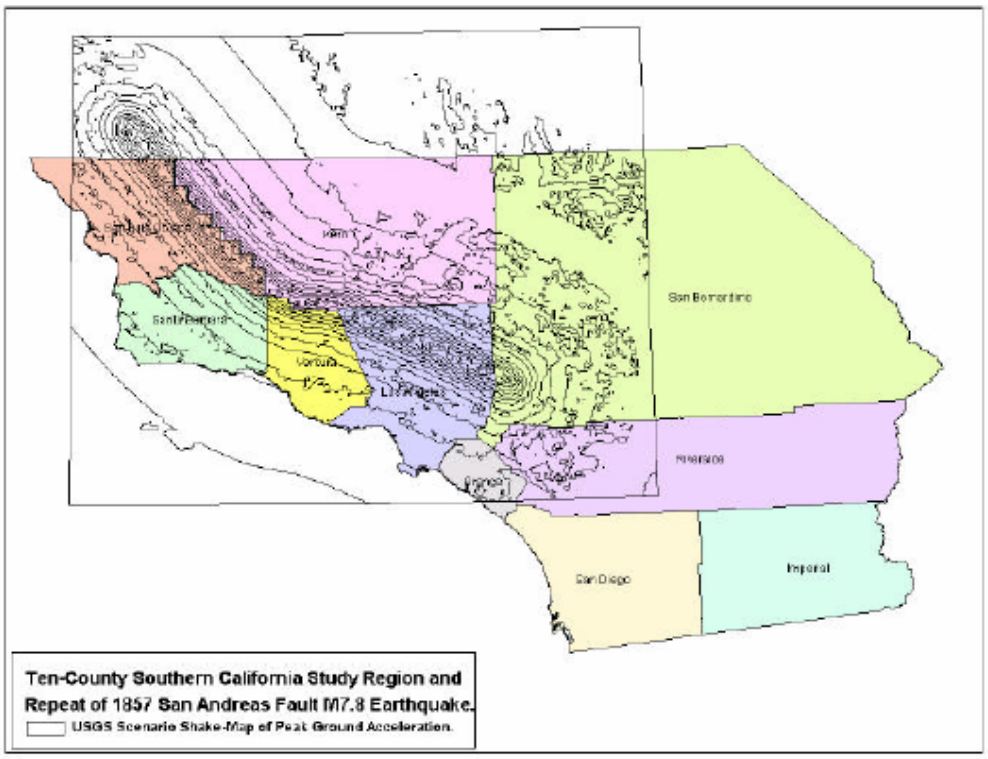
Rapid Instrumental Intensity Map for San Andreas 1857 rupture Scenario

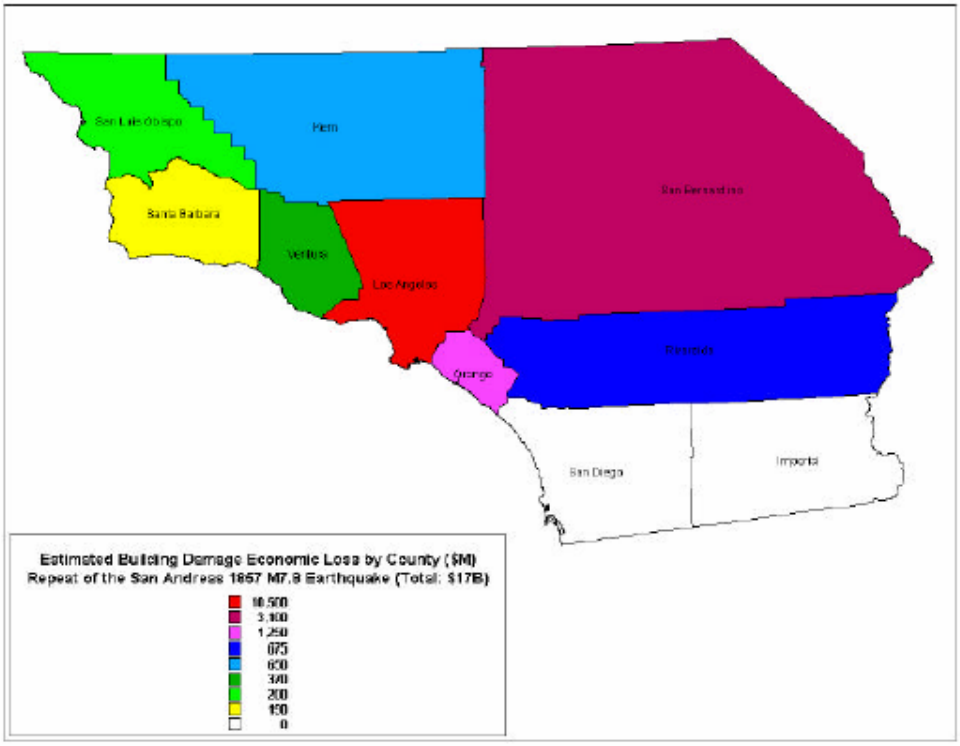
Scenario Date: Fri Feb 15, 2002 08:00:00 AM PST M 7.8 N35.70 W120.30 Depth: 10.0km



PLANNING SCENARIO ONLY -- PROCESSED: Sun Feb 23, 2003 08:28:56 PM PST

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 Peak Ground Acceleration.


Kern
Santa Barbara
Ventura
Los Angeles
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Repeat of the San Andreas 1857 M7.8 Earthquake (Total: $17B)
10,500
3,100
1,250
875
600
300
200
100
0

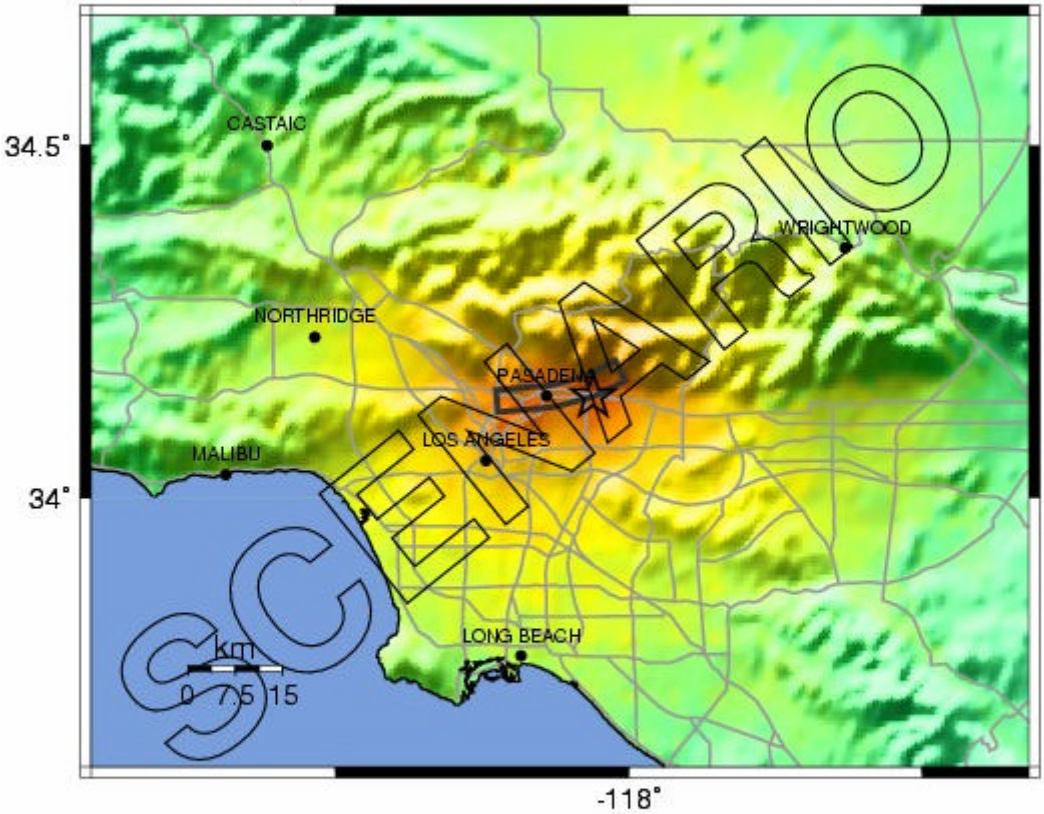
SCENARIO: S-12

Raymond Fault M6.5 Scenario

-- Earthquake Planning Scenario --

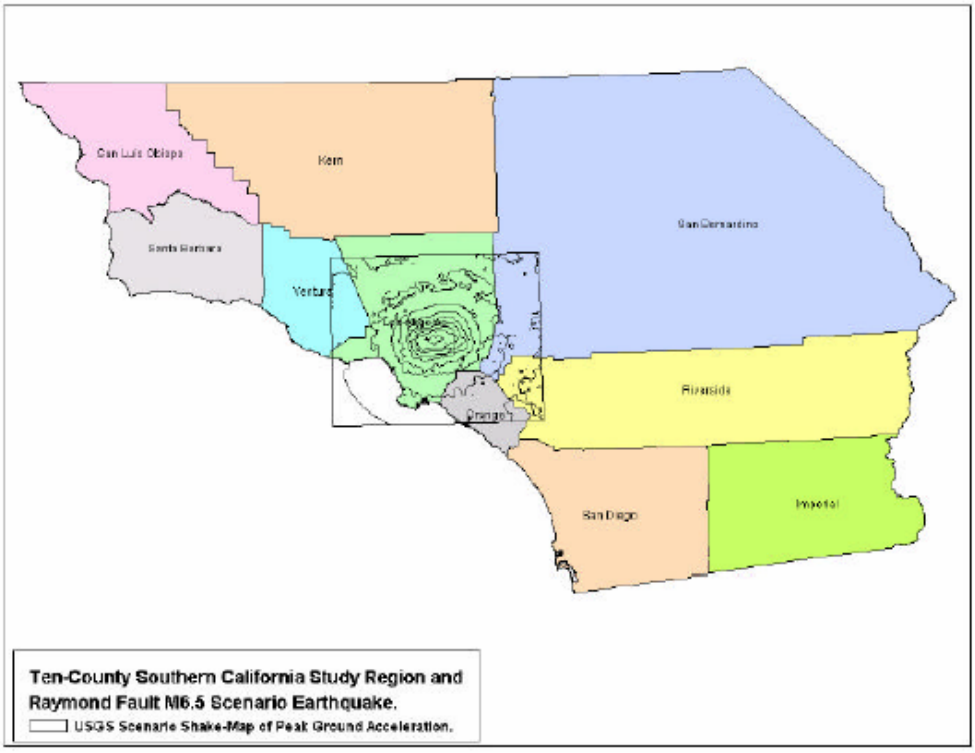
Rapid Instrumental Intensity Map for Raymond Fault M6.5 Scenario

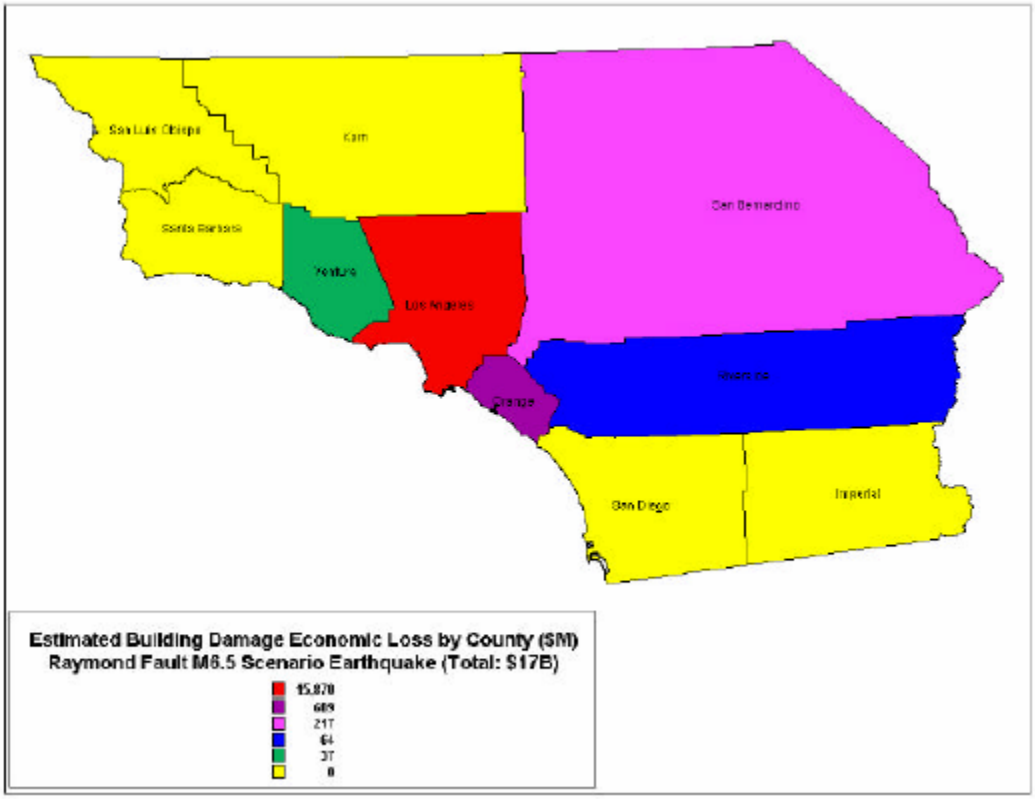
Scenario Date: Thu Apr 4, 2002 09:15:00 AM PST M 6.5 N34.14 W118.06 Depth: 13.0km



PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:12:15 PM PDT

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
Riverside
Orange
San Diego
Imperial
Ten-County Southern California Study Region and
Raymond Fault M6.5 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)
Raymond Fault M6.5 Scenario Earthquake (Total: $17B)
15,870
689
217
64
37
0

Liquefaction Hazard

Liquefaction is one of the most destructive secondary effects of seismic shaking. Liquefaction results from the loss of soil strength due to a sudden increase in pore water pressure during shaking. It occurs primarily in saturated and loose, fine to medium-grained soils, in areas where the groundwater table is 50 feet or less below the surface. Liquefaction occurs most often where groundwater is within 30 feet of the surface, but it may occur in areas where groundwater is up to 50 feet beneath the surface. High pore pressures that build up in sediments during repeated seismic vibrations cause the soil to behave as a liquid. The excess pore pressures are often pushed upward through fissures and soil cracks causing a water-soil slurry to bubble onto the ground surface. The resulting features are called sand boils, sand blows, or "sand volcanoes".

The reduction in soil volume due to densification or extrusion causes settlement which may result in failure of structural foundations and retaining walls. Substantial structures, such as multistory buildings or freeway interchanges, may settle up to several feet below grade or overturn in liquefied material. As with fault rupture, liquefaction can impact utility, flood control, and transportation lifelines. Damaged roadways pose accessibility problems for emergency response vehicles and can complicate evacuation operations. Severed water distribution lines can also impair fire fighting efforts or, if associated with wastewater line breaks, may contaminate the drinking water supply. Lateral spreading, a particularly damaging form of liquefaction that results in shallow flow failures on gently-dipping ground, caused the destruction of the Juvenile Hall facility in the 1971 San Fernando Earthquake.

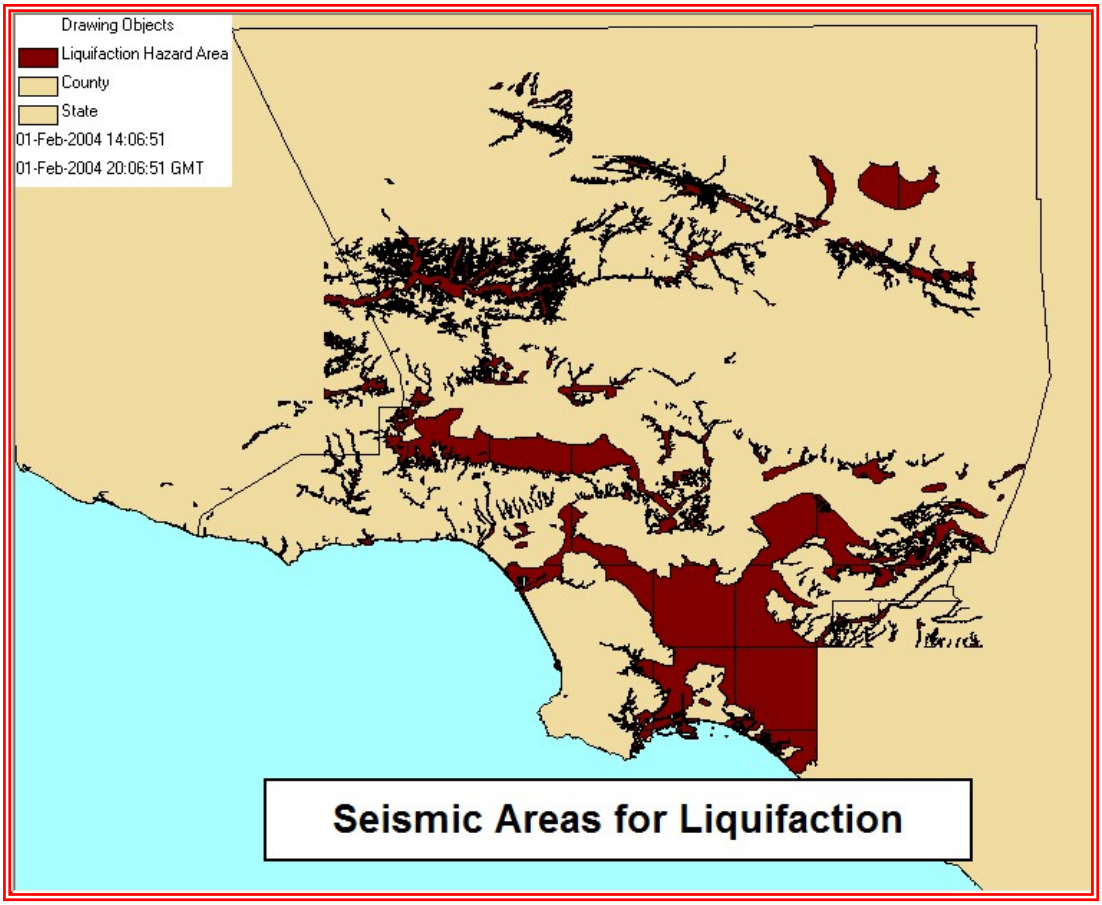
Modified Mercalli intensities as low as 7.0 can induce damaging liquefaction. A review of the seismic intensity data derived in this study indicates that the City of Burbank may experience this level of shaking from a variety of nearby earthquake sources. Given the potential impact of earthquake-induced ground failure, an assessment of areas prone to liquefaction is useful to urban and disaster response planners.

Liquefaction Hazard Analysis

For liquefaction to occur, three primary conditions need to occur: 1) a moderate to strong (M 6 or greater) earthquake that generates strong ground shaking; 2) shallow groundwater, within 50 feet of the ground surface; and 3) laterally extensive layers of loose, fine to medium-grained sandy soils within the saturated zone. A moderate to strong earthquake can be expected to occur just about anywhere in southern California. Therefore, liquefaction susceptibility studies concentrate on identifying those areas where loose, fine to medium-grained soils occur in conjunction with shallow groundwater levels. Because groundwater levels can and do fluctuate over time, the liquefaction susceptibility of an area can also change over time.

Areas prone to ground failure can be identified using one of several state-of-the-art procedures that have been developed for this purpose. Information has to be collected regarding: a) the distribution of youthful, cohesionless, granular surficial and subsurface sediments which are more likely to liquefy, and b) the location of shallow (50 feet or less) or perched (water trapped in sediments at a higher elevation than that of the regional water table) groundwater. This data is a necessary component of any hazard analysis, regardless of which procedure is used to identify the liquefaction-prone localities within the region.

(Liquefaction may occur where groundwater is within 50 feet of the surface if the surface and subsurface sediments are susceptible to liquefaction. In the City of Burbank, perched groundwater zones are known to occur within 50 feet of the ground surface. The regional groundwater aquifers are about 150 feet below the surface.)



Studies have shown that liquefiable ground conditions exist in the City of Burbank. In general, all of the area of Burbank west of the Golden State Freeway (I-5) is underlain by recently deposited sediments that may include potentially liquefiable layers (Zones 1 and 3). If groundwater levels in this area rise to within 50 feet of the ground surface, the sediments would have a moderate to high susceptibility to liquefaction. The liquefaction susceptibility of an area can also be evaluated based on the historical groundwater record. The highest water levels recorded in the San Fernando Valley were measured in 1944, the result of unusually high rainfall rates in 1941, 1943 and 1944 (Tinsley et al, 1985). In 1944, the water table was within 50 feet of the ground surface in the area of Burbank west of the Golden State Freeway. In the last 50 years, however, regional groundwater levels have dropped in response to the increased volume of water extracted from wells.

A 1993 map of groundwater contours for the upper Los Angeles River area shows that in most of Burbank, the water table is more than 100 feet deep. The only exception is along the southwestern portion of the City, near the Ventura Freeway, where groundwater has measured at about 50 to 60 feet below the ground surface. Therefore, as long as there is continued extraction of groundwater in the upper Los Angeles River area, and we do not experience a series of unusually high rainfall years, groundwater levels in Burbank can be expected to remain at or deeper than 50 feet, with a resultant low to very low level of risk from liquefaction for most of the City. The recognized liquefaction-prone areas cover approximately 340 acres; 200 acres along and adjacent the Los Angeles River and 140 acres parallel to Interstate 5.

The liquefiable (less than 30 feet to groundwater) and potentially liquefiable (30 to 50 feet to groundwater) area along Interstate 5 is used predominantly for general manufacturing, industrial and commercial purposes. Manufacturing zones generally include some hazardous facilities. Hazardous facilities, as defined by the Uniform Building Code, are buildings where explosives or toxic chemicals in quantities above state standards are used or stored. It is reasonable to assume that some of these facilities may be structurally deficient and/or

vulnerable to damage from strong ground motion, liquefaction or surface fault rupture. An earthquake generating medium to strong seismic intensities could cause a release of hazardous materials from these facilities.

There are several state legislative measures aimed at controlling hazardous materials. These measures include requirements for storage and handling, and development of a Risk Management and Prevention Plan (RMPP) for businesses. Although an evaluation of the structural stability of hazardous facilities is not required by the Fire Code, RMPPs require seismic evaluation and make recommendations for facilities that present an Acutely Hazardous Materials (AHM) accident risk. An assessment of the structural integrity of buildings, in which hazardous materials are stored and handled, including storage tanks and other key nonstructural containment features, should be emphasized in areas prone to liquefaction.

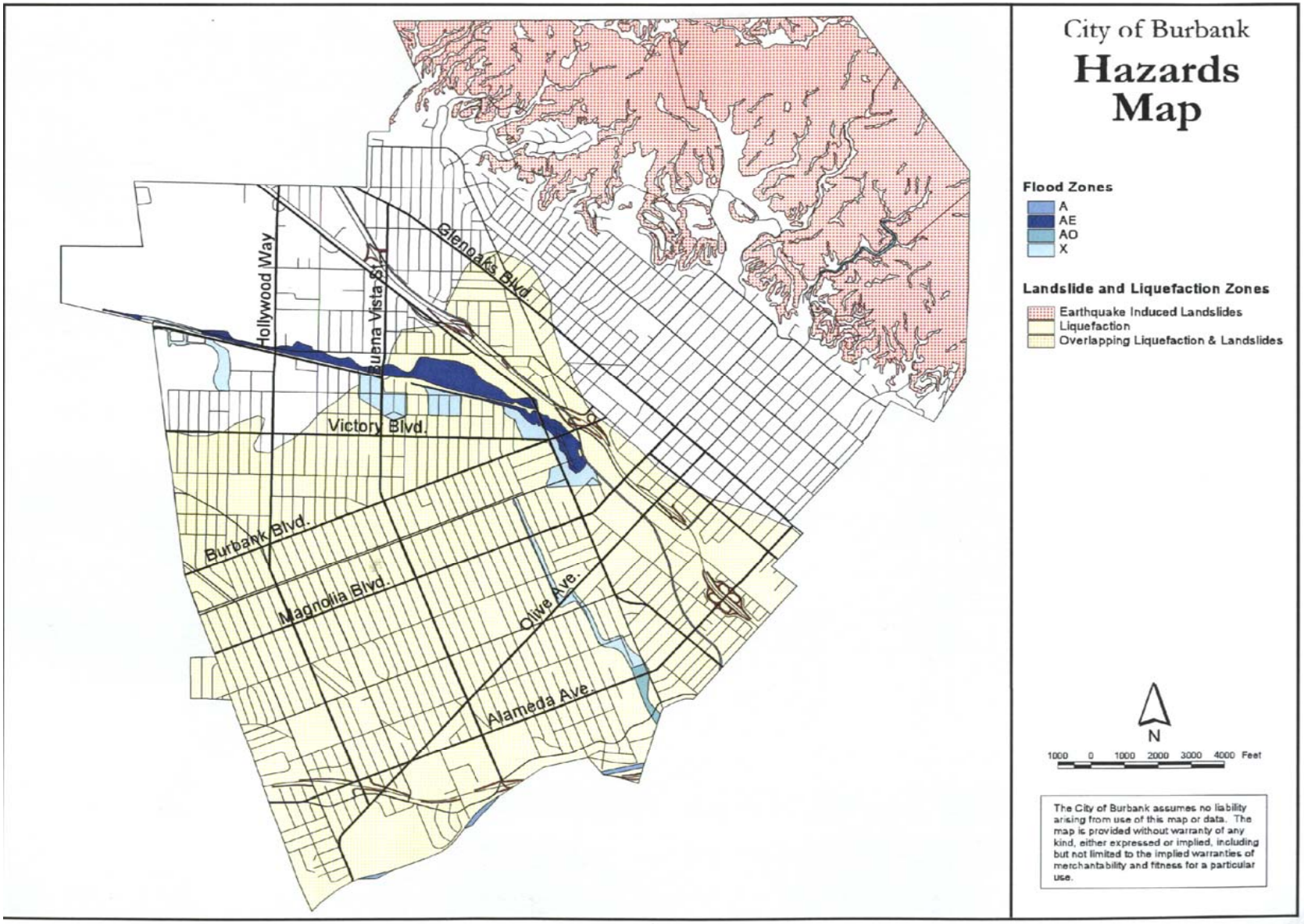
The liquefaction-prone area adjacent to the Los Angeles River, which consists of approximately 140 acres, is the general location of the Saint Joseph Medical Center, the Warner Brothers Studios and Disney Studios, as well as several mid-rise commercial buildings. The most serious threat from liquefaction-related damages involves the Saint Joseph Medical Center due to its necessary role in emergency response.

Liquefaction Hazard Management

The state building code requires that the potential for liquefaction be eliminated in cases where critical facilities are situated in a designated liquefaction-prone area. The Building Code does not however provide specific mitigation measures. Several mitigation alternatives exist, including:

- Replacing existing soil with nonliquefiable material;
- Emplacing permeable columns of gravel that provide a release mechanism for the buildup in water pressures that cause liquefaction;
- Densifying the soil using any of several types of dynamic or vibratory compaction equipment; or
- Lowering the water table using dewatering wells.

Deep pilings may be appropriate for facilities located in or near stream channel areas, while more elaborate methods may be appropriate for large subdivisions or industrial facilities. Some building codes require structural mitigation of buildings over 3-stories high or with over 2,000 pounds per square foot of structural load if liquefaction hazards were encountered during the geotechnical investigations. Structural mitigation of smaller buildings and private residences is usually left to the discretion of the owner or developer.


City of Burbank
Hazards Map
Flood Zones
A
AE
AO
X
Landslide and Liquefaction Zones
Earthquake Induced Landslides
Liquefaction
Overlapping Liquefaction & Landslides
N
1000 0 1000 2000 3000 4000 Feet
The City of Burbank assumes no liability arising from use of this map or data. The map is provided without warranty of any kind, either expressed or implied, including but not limited to the implied warranties of merchantability and fitness for a particular use.
Hollywood Way
Buena Vista St.
Glenoaks Blvd.
Victory Blvd.
Burbank Blvd.
Magnolia Blvd.
Olive Ave.
Alameda Ave.

Vulnerability of the City to Seismic Hazards

Water Storage Facilities and Supply Network

In the event of a major earthquake, the aqueducts supplying water to our region--Colorado, California and Los Angeles aqueducts--could sustain damage, causing interruptions in the water supply, possibly for weeks or even months. The numerous major reservoirs in the southern California region provide ample storage to meet demands during the time required for repair; however, damage to water transmission lines, local storage reservoirs and pumping plants, as well as local distribution systems, will affect water availability and pressure. The absence of electrical power for extended periods will, in some areas such as the hillside, preclude water deliveries where pumping is necessary, even though conveyance facilities may be intact. Even if water distribution systems are effective in delivering water, this water may not be potable due to contamination. Many areas could be dependent on tanker trucks to provide their basic needs.

Reservoirs

The statutes governing dam safety in California are implemented through the California Department of Water Resources. Section 8589.5 of the California Code requires that inundation maps and emergency response plans be prepared for dams or debris basins affected by state safety regulations. However, the Department of Water Resources jurisdiction includes only those dams 25 feet or more in crest height or dams with storage capacities of 50 acre-feet or more. As a result, many potentially-hazardous levees, railroad and highway fills, circular and elevated tanks, and federal dams could be exempt from the Water Code.

Burbank Reservoir Nos. 1, 4 and 5 are under state regulations. The aspects which are considered when evaluating the relative threat of dam failure and inundation posed by these reservoirs include:

- Age and quality of construction;
- Type of construction;
- Seismic design standards for ground shaking;
- Threat of liquefaction to earthen fill embankments; and
- Threat of fault rupture to dam abutments or to foundations of concrete and earthen fill dams.

Burbank Reservoir No. 1 is covered to protect the stored, potable water from contamination. This cover also protects the dam from overtopping during heavy storms, generally the most frequent cause of earthen dam failure. The reservoir was built in 1928, before earthquake construction provisions were added to the Uniform Building Code and was rehabilitated in 1989. Rehabilitation included reconstructing the upper 20 feet of slabs, installing new columns and footings for the roof, resealing all slab joints and installing a soil embankment monitoring system. The rehabilitated reservoir is reportedly judged to be "grossly stable" under today's standards.

Records show that most concrete dams perform well during large earthquakes. Nevertheless, the concrete tank structures of Burbank Reservoir Nos. 4 and 5 were built in the late 1940's and early 1950's, prior to the development of sophisticated engineering design methods that incorporate any knowledge of fault rupturing and ground shaking hazards. In the event of a catastrophic earthquake, concern should be focused on the stability of the foundation and abutments in these and similar concrete dam structures.

In coordination with the Department of Water Resources, the Burbank reservoirs are inspected 1 to 2 times a year for cracks, leakage and other signs of deterioration that may result in failure. All facilities have operational foundation underdrains that are monitored monthly for increases in leakage. In addition, the Burbank Water & Power operates a system of groundwater monitoring piezometers around Burbank Reservoir No. 1. These monitoring devices are used to record the rate of seepage, which is continuously examined to check for signs of damaged piping in and around the system.

A maximum credible earthquake on the Verdugo Fault poses the greatest potential threat of dam failure for Burbank Reservoirs Nos. 1, 4 and 5. Although in compliance with state standards for dam safety, worst-case planning should not preclude the possibility of dam failure and inundation. To interpret the risk where a degree of uncertainty remains, informed perception and engineering judgment need to be balanced. Seismic intensities of 10 to 10.5 MM, as those predicted to result from a maximum credible earthquake on the Verdugo fault, could damage the three Burbank reservoirs. Reservoir No. 1 could also be damaged if the saturated earthen materials in the reservoir liquefy. Failure of these reservoirs could result in catastrophic flooding of areas downstream. The ongoing dam safety program and the City Disaster Emergency Operations Plan are vital components of a dam or reservoir risk-reduction program. Increased public awareness of the worst-case possibility should also help facilitate emergency operations, if ever required.

Water Tanks

The safety of water tanks is the responsibility of the local jurisdiction. Old or inadequately-designed water storage tanks located in areas prone to ground failure or strong ground motion could pose a risk of failure and consequent minor flooding of small areas downstream. Many water tanks date from as early as World War II. Site-specific structural evaluations of the tanks should be carried out to assess the actual seismic risk of water tanks in the City of Burbank.

Water Supply Network

A critical aspect of the City's water system is the post-earthquake fire suppression capability of the water distribution system. Approximately 85 percent of the water distribution network relies on cast-iron pipelines. These pipes can easily break if liquefaction or ground settlement occurs, or if the ground moves as a result of fault rupture. The pipes can also be damaged by high amplitude ground waves. City of Burbank Public Services Department has been replacing cast-iron pipes with ductile iron pipes. In addition, all 4-inch pipes and smaller are being replaced and made more earthquake resistant.

Breaks in the water distribution pipeline and or loss of electricity can result in significant reductions in water pressure. Diminished peak water load supplies can seriously hamper fire control operations after an earthquake.

A maximum credible earthquake on the Verdugo fault could result in a significant reduction in water pressure if water lines along the surface rupture zone or the liquefaction-prone areas break. Pipelines could also be expected to break in areas that experience seismic intensities of 10+. A worst case scenario earthquake on any of the other faults considered in this report could also result in pipeline breaks.

Far-field earthquakes should have much less of an impact on the water supply distribution system, unless liquefaction is induced along and adjacent to the Los Angeles River. Differential settlement as a result of moderate and near-field earthquakes would create localized emergency water flow problems.

Hospital Facilities

As a result of the 1971 San Fernando Earthquake, the State of California passed the 1972 Hospital Act. This act preempts the primary responsibility for hospitals from local control, and charges the state with regulatory review responsibility. Although the legislation conveys the importance of keeping a hospital facility functioning after a major earthquake, the Act does not require that a hospital remain undamaged. The design and construction standards implemented as a result of the 1972 Act are considerably more rigorous than those employed in the construction of older, pre-1972 hospitals. State law requires that general acute care hospitals be upgraded to current earthquake design standards if undergoing voluntary rehabilitation.

The main hospital facility in the City of Burbank is Providence St. Joseph Medical Center.

Providence St. Joseph Medical Center is an acute care hospital with a trauma center, licensed for about 600 beds. The usual patient census at this facility is less than 300, with the staff and support materials on hand for that number. Additional patient care units can be opened and staffed with a 12 hour lead time. The hospital facility consists of several multi-storied buildings with construction dates ranging from 1947 to 2004. The Robertson Tower and newly completed wing meet the most critical construction standards for seismic safety, but the older portions of the facility do not. Financial constraints have precluded the establishment of a seismic retrofit program for the facility; however a nonstructural damage mitigation program is in its infancy.

Providence St. Joseph Medical Center is located roughly three and one-half miles away from the Hollywood and the Verdugo faults, respectively. An earthquake on either fault could produce seismic intensities at the hospital site as high as 9.5 to 10. The hospital is located just outside of a liquefaction-prone area designated along the Los Angeles River; therefore, there is a risk of structural damage to this facility from liquefaction. Evacuation routes and emergency entrances and exits to the hospital may be nonfunctional if these cross liquefaction-prone areas near the river. Underground utilities serving the facility may also be rendered nonfunctional. Any of these possibilities could impair the vital function of the facility in an emergency. The most severe threat to the hospital buildings will be strong ground shaking.

Unnamed Fault No. 6 has been mapped through the northeastern corner of the St. Joseph Medical Facility. As discussed previously, the earthquake recurrences, and the potential for surface rupture on this fault, have not been established. There is the real possibility, given the uncertainties regarding this fault, that the facility could suffer damage to its buildings and/or supporting infrastructure from an earthquake on this little known fault.

Vencor Hospital is an acute care hospital which functions as a long-term respiratory treatment facility. The hospital's licensed bed capacity is 95, with a usual patient census of 40 people. Vencor does not maintain a trauma center; however, during an emergency, vacant beds could be occupied. Acquired in August 1997, the hospital consists of several mid-rise buildings and is currently being remodeled. Seismic retrofit will be incorporated into the remodel as required by state law. The hospital is located less than one mile away from the trace of the Verdugo Fault. Movement on the Verdugo Fault represents the worst-case scenario for disaster response planning purposes. The alluvial fan underlying the hospital may amplify the seismic waves generating intensity values of MM 9.5 to 10. Damage to the hospital would include failure of nonstructural building components such as partitions, ceilings, and equipment. Structural damage to older, pre-1972 buildings should also be expected. The risk of surface rupture at the hospital facility from the Verdugo Fault appears to be low. A major concern would be the continued operation of the hospital in the event that off-site public utilities are rendered nonfunctional. Fallen building debris blocking emergency entrances and exits would also cause access problems.

Both hospital facilities have detailed disaster plans which deal with seismic hazards, as well as other disasters and emergencies occurring at the hospital or to which the hospital must respond.

Transportation/Circulation Facilities

Primary transportation facilities in the City of Burbank include the freeway and surface-street networks, the railroad system, and the Bob Hope Airport.

Burbank is traversed by two freeways: Interstate 5 (Golden State Freeway) which travels in a north/south direction parallel to San Fernando Boulevard and Routes 134/U.S. 101 (Ventura/Hollywood Freeway) which travels through the southwestern corner of the City through the Media District. These freeways were built as part of a freeway expansion program in the 1950s and 1960s. Many of the ramps, crossovers and bridges are also from this pre-1971 period.

The California Department of Transportation (Caltrans) is in the midst of a major statewide freeway retrofit program aimed at upgrading the seismic design of certain state highway and freeway structures. This phase is directed at numerous pre-1971 single-column structures located within Los Angeles County that have an inferred relatively high-risk of being damaged by severe ground shaking. Several freeway structures located in the City of Burbank were identified by Caltrans as being in need of seismic retrofit. The following is a list of structures in Burbank that the California Department of Transportation has evaluated for seismic retrofit.

BRIDGE NAME	PHASE	COMMENTS
Pass Avenue overcrossing	1	Retrofit complete
Alameda Avenue overcrossing	1	Retrofit complete
Hollywood Way overcrossing	1	Retrofit complete
Olive avenue overcrossing	1	Retrofit complete
California Street overcrossing	1	Retrofit complete
Bob Hope Drive undercrossing	1	No retrofit required
Riverside Drive undercrossing	1	No retrofit required
Providencia overhead—Right	1	Retrofit complete. Superstructure only, substructure by SR 650.
Providencia overhead—Left	1	Retrofit complete. Superstructure only, substructure by SR 650.
San Fernando undercrossing	2	
Alameda Avenue undercrossing (four separate bridges)	2	Retrofit complete
Providencia Avenue overhead, right	2	Substructure only, superstructure by SR 599.
Providencia Avenue overhead, left	2	Substructure only, superstructure by SR 599
Verdugo Avenue undercrossing	2	No retrofit required
Olive Avenue overcrossing	2	No retrofit required
Magnolia Boulevard overcrossing	2	Construction complete.
Burbank Blvd./Buena Vista overcrossings	2	No retrofit required
Buena Vista/Winona undercrossing	2	Construction complete

Retrofit work has been completed on all Phase 1 & 2 projects.

Earthquake damage at the Bob Hope Airport is expected to be the result of strong ground motions. Damage may include broken windows in the air control tower, and downed air traffic control computer systems. Unnamed Fault No. 2 crosses through the western end of the airport. Should this fault be the

locus of ground rupture as a result of an earthquake on this poorly-understood system of basin faults, the western runway would most likely be rendered non-functional.

The Southern Pacific Railroad service lines transverse the City parallel to Interstate 5 along the southern border of the former Lockheed Aircraft Corporation site and the Bob Hope Airport and traverse along Vanowen. Liquefaction may damage the rail lines along Empire Avenue. It is anticipated that rail lines may be closed for up to 72 hours due to roadbed failure caused by liquefaction. Liquefaction is also anticipated to occur in the western San Fernando Valley portion of this line. In addition to the threat of liquefaction, a derailment, or a hazardous material incident resulting from a derailment, could prolong the amount of time the rail lines are closed and possibly cause the evacuation of the surrounding area. Metrolink and Amtrak service which runs along these lines would be interrupted as the result of a derailment, rail damage or rail obstruction. Metrolink commuter rail proved to be a critical resource in bringing employees, as well as commuters from other areas who use Burbank as a transit hub, into the City after the 1994 Northridge Earthquake when the freeway system was not functioning.

Natural Gas Facilities and Petroleum Pipelines

The natural gas utility network in the City of Burbank is operated by the Southern California Gas Company (SoCal). SoCal embarked on a retrofitting program of their steel and cast iron pipelines 4-inches in diameter and smaller after the 1971 San Fernando Earthquake exposed the vulnerability of the gas distribution system. About 90 percent of the distribution supply pipeline replacements have been done with plastic polyethylene pipe. The new transmission and distribution trunk lines are made of welded .375- to .500-inch thick steel pipe. Although larger pipes have generally performed well in most earthquakes, leaks in 20-inch semi-high pressure lines in Oakland, 12-inch lines in Hollister, and 8-inch lines in Santa Cruz were reported after the 1989 Loma Prieta Earthquake. These damaged pipes resulted, at worst, in service disruption; however, the possibility of fire from ignited natural gas leaks should not be overlooked. Gas leaks can also occur at the connection between the distribution supply mains and the pipes leading to individual buildings and residences. Ignition of natural gas vapors from home appliances such as unanchored gas heaters and gas-fired water heaters is a principal cause of earthquake-related fires.

A maximum credible earthquake on the Verdugo fault could result in numerous damaged and leaking mains, valves, and service connections associated with the small-diameter gas supply system underlying surface streets. Damage would be concentrated along and adjacent to the predicted zone of rupture that extends northwestward from easternmost Sunset Canyon Drive to the point where the fault leaves the City at its juncture with Interstate 5. Pipes not made with earthquake-resistant plastic would most likely break and leak, causing fires along these streets. Similar scenarios are possible along and adjacent to the liquefaction-prone areas along Interstate 5 and the Los Angeles River, especially as a result of a maximum credible event on the Hollywood fault. Damaged house line connections, overturned water heaters, and malfunctioning electrical utilities could also cause fires throughout the City.

In the event of an earthquake, the Gas Company recommends that people do not turn off their gas if they do not hear or smell a gas leak. This is because, in such an event, natural gas could be the only source of energy; also, it could take up to three months for the Gas Company to turn all of the gas lines back on if everybody shut them off.

There are gas distribution trunk lines in the City of Burbank. The 8-inch trunk lines along Oak Street do not cross any known liquefaction-prone areas. The 6-inch trunk line along Hollywood Way may be susceptible to breakage where it crosses the liquefaction-prone zone along and adjacent to the Los Angeles River. The trunk line following Burbank Boulevard is also vulnerable to ground failure in the vicinity of Interstate 5. The 30-inch transmission line along Glenoaks Boulevard could be damaged as

a result of fault rupturing between Scott Road and Buena Vista Avenue. If any of these regional natural gas supply lines are broken it could take much longer than just a few days to restore the ability to generate electrical power at the Olive/Magnolia Power Plants.

A petroleum fuel pipeline also crosses the City of Burbank. Damage to this pipeline, as a result of an earthquake, would most likely cause localized contamination and disruption of service. There is also a risk of fire as a result of damage to these lines.

Electrical Power Facilities

The principal elements of the electrical power system include power generating plants, natural gas lines supplying the generating plants, transmission switching stations and distribution substations, overhead and underground high-voltage transmission lines, and small emergency power generators. The City of Burbank owns two power plants with a combined generating capacity of 233,000 kilowatts. Additional power is purchased from various sources, and delivered over the Los Angeles Department of Water and Power (LADWP) system, through an interconnection at Los Angeles Receiving Station "E" located on Whitnall Highway near Burbank Boulevard.

Above-ground substations and transmission lines, high- voltage transformers, circuit breakers and ceramic insulators, are susceptible to damage from high frequency ground motion from a near-field earthquake. Seismic intensities, as low as that of the 6.8 Northridge earthquake, can seriously disable this segment of the electrical network system. Unless ground failure occurs, power generating plants generally experience only slight damage during an earthquake, even when exposed to seismic intensities as high as 9.0.

Damage to the Olive and Magnolia Power Plants or to the electrical power transmission facilities as a result of a San Fernando or Sierra Madre fault earthquake scenario would probably not severely impair the City's power distribution system other than causing a short term blackout. Power sources outside the area of strong ground motion should be able to channel needed power to the City. The transmission network can easily be rerouted to restore power to most areas. Critical facilities should be able to function on back-up power while energy is restored to the affected areas. Severely impacted non-critical facilities should be able to rely on back-up power sources, including batteries and generators, for up to three days. Priority would be afforded to power restoration of hospitals, and other emergency service facilities.

An earthquake scenario on the Verdugo or Hollywood fault would probably disable the major substation operated by the Los Angeles Department of Water and Power (LADWP). The projected earthquake intensities of 9+ would cause extensive systems failure throughout the City of Burbank. Given that the surrounding sub-regional network is essential to reroute power to the City, damage to these transmission facilities would determine how long it would take to restore power. Restoration of power through other substations can be delayed as much as a few days or weeks depending upon the degree of damage.

The natural gas and fuel lines that feed the Olive/Magnolia Power Plants may be damaged by liquefaction. Inspection and repair of these lines, if they are damaged, could take longer than three days.

Damage to the Burbank City power plant and its ancillary facilities in affected areas can be expected to reduce generating capacity. The potential impact of this reduction in local output is lessened, however, by the availability of power from other sources outside the affected area and by the reduction in consumer demand that will occur. Immediate concerns will focus on repairs necessary to restore power to areas of greatest need such as hospitals, public health and safety, water pumping stations, sewage treatment facilities, etc. Major restoration problems include repairs necessary to route power

through the major substations, restoration of damaged and collapsed transmission line towers, reactivation of equipment at local substations, and replacement of fallen poles, burned transformers, etc.

All electrical lines are supposed to de-energize automatically if electrical flow is interrupted; however, isolated incidents of energized lines on the ground should not be discounted. Fallen transmission lines can drain vital utility manpower resources since each line has to be checked to verify that it does not pose an electrical shock or fire hazard.

When such events occur, the Burbank Water & Power's response will be coordinated through the City's Emergency Operations Center and in accordance with BWP's Emergency Systems Restoration Procedure. This document instructs personnel as to their responsibilities and what actions they must take in the event of power failure caused by earthquake or other natural disaster.

Wastewater Disposal System

The Burbank Water Reclamation Plant is located on West Chestnut Street adjacent the Burbank Western Flood Control Channel in the middle of the City. About 220 miles of pipeline carry the sewage generated in Burbank to the Burbank Water Reclamation Plant (BWRP). Some of the reclaimed water is used in the cooling towers at the City's Steam Power Plant as well as for landscape irrigation in various places in the City; the remainder of the reclaimed water is then discharged into the Burbank Western Channel. The BWRP lies in an area identified as being susceptible to liquefaction; this means that during an earthquake, the ground movement under the facility may render part or all of the wastewater treatment facility inoperable. Most of Burbank's sewage flows to the Burbank Water Reclamation Plant by means of gravity; only a small portion of the City's wastewater needs to be pumped into the plant. This means that after an earthquake, even if there is no power in the city, the sewage will continue to flow to the treatment facility via a system of pipelines, assuming the pipelines are intact. In the event that the Burbank treatment facility is partially or totally unable to treat the accumulating sewage, it has two options: to divert the untreated sewage to the Los Angeles North Outfall if the bypass lines are unaffected, or to let the untreated sewage flow into the Burbank Western Channel .

Normally, under contract with the City of Los Angeles, Burbank diverts a small portion of its sewage to the Los Angeles Hyperion Treatment Plant system via the North Outfall Sewer (NOS). In the event of an emergency rendering the BWRP inoperable, Burbank may be able to divert all or part of its untreated sewage directly into the NOS; this however is only possible if the NOS is not damaged and the Burbank pipeline system needed to carry the diverted sewage to the NOS is not damaged. If sewage cannot be treated at the BWRP or diverted to the NOS, it may be necessary to let the untreated sewage flow into the Burbank Western Channel and disinfect it with chlorine if possible. In the event of such a release into the Burbank Western Channel, public notices would be ~~are~~ issued and reports made to the Los Angeles County Department of Public Works the Regional Water Quality Control Board and other regulatory agencies.

Burbank's vast network of sewer pipelines was constructed, for the most part, in the 1930's and 40's and consists primarily of clay pipes. These pipes are maintained by the Public Works Department and were inspected using video cameras which travel along the sewer lines underground. Severe shaking and ground instability brought on by a large earthquake can break or crack these pipes causing seepage of raw sewage into the soil and possible groundwater contamination. Public health regulations require that underground water and sewer lines be laid a distance apart and that the water lines be laid above the sewer lines; this is to protect against contamination of drinking water in the event that both pipelines are broken.

A significant amount of electricity is needed to run the wastewater treatment facility and to pump sewage along the pipes in certain areas of the city. When a power failure occurs, either as the result of an earthquake or other disaster, the BWRP is unable to function. The facility does not have an on site alternate power source; it relies on power generated by the City power plant or electricity imported from the statewide grid system. An on-site electrical generating system which would be used only in the event of a major emergency is considered not to be cost effective due to high capital investment costs, space constraints and stringent and costly air quality requirements of such a system required by the Air Quality Management District. Following an earthquake, the BWRP may be without electricity, and therefore inoperable, for several days until local power is restored or the regional grid system is restored and the transmissions system repaired.

At present the BWRP is served by two electrical substations; should these substations not be able to deliver the necessary power the facility has no power.

Chlorine is still the primary disinfecting agent used in the wastewater treatment process. This toxic chemical is carefully regulated and a detailed "Risk Management and Prevention Program" for the handling chlorine at the plant has been submitted to the Environmental Protection Agency. In addition, continuous air monitoring systems are located in the chemical storage and application facilities for detecting any leaks. There is an emergency generator to supply power to the chlorine scrubber building in the event of a leak during a power outage. Chlorine is currently being phased out and replaced with a sodium hypo chloride disinfection process.

In the event of an emergency, such as an earthquake, the BWRP is linked to Burbank's EOC by means of telephone and radios.

Potentially Hazardous Buildings

The California state legislature enacted the Unreinforced Masonry (URM) Building Law in 1986 (Chapter 250, Statutes of 1986; SB 547 Alquist; Government Code Section 8875 et seq.) which requires that a complete inventory of URM Buildings be completed by January 1, 1990. The law calls for the identification and development of mitigation programs for URM buildings with load bearing walls that support the floors and roof, and for buildings with URM infilled walls. Although historical buildings and warehouses with few occupants (unless they are used to store emergency supplies) are exempt from the identification phase, the Seismic Safety Commission recommends that these buildings be reviewed for adequacy with respect to seismic hazards (Section 37602 of the California Health and Safety Code).

As of 1990, the City of Burbank was one of only 22 jurisdictions in the County of Los Angeles that had enacted a seismic upgrading ordinance. The ordinance establishes "minimum standards for structural resistance for all buildings in the City except detached single-family residences and detached multifamily residential buildings containing five or fewer dwelling units". The ordinance is aimed at pre-1934 buildings with unreinforced masonry bearing walls. Buildings with URM in filled walls and deficient electrical, plumbing, mechanical, and fire safety features are not addressed in the ordinance. The City identified 51 masonry buildings and scheduled them for mandatory abatement; as of 1995, most had been brought into compliance. The City of Burbank has also made significant progress in retrofitting essential buildings (hospitals, emergency facilities, etc.), and high-risk structures (with greater than 100 person capacity). The Seismic Safety Commission also recognizes other building types with a history of poor performance during past earthquakes. Concerns for owner liability and public safety suggest that safety programs may be directed toward these building types in the future. The Seismic Safety Commission recommends that proactive safety programs be concerned with the following building types (in addition to buildings with masonry in filled walls not yet covered by the City of Burbank seismic safety upgrading ordinance):

- Buildings with tilt-up concrete construction;
- Nonductile concrete frame buildings with inadequate, or no steel reinforcement;
- Certain buildings with architectural irregularities, such as those with long spans, minimal amount of interior shear walls, or irregular shapes;
- Buildings with weak "soft-stories";
- Dilapidated, or improperly maintained buildings, and buildings weakened through inadequate modification;
- Mobile homes;
- Older single-family residences; and
- Buildings with interior and exterior nonstructural hazards.

Buildings with deficient electrical, plumbing, mechanical or fire safety features could also be included in the Seismic Safety Commission list above. Seismic safety hazards and risk increase with the age of the building.

Predictive seismic intensity maps cannot identify which structures will be severely damaged in the event of an earthquake, unless detailed knowledge of site-specific structural deficiencies are included as part of the study. Unless ground failure occurs, the following generalized summary of anticipated damage could result from both near-field and far-field earthquakes.

- Pre-1934 masonry buildings which have not been retrofitted will experience most of the structural damage in a major near-field earthquake (Deppe, 1988). Although retrofitting these buildings would decrease the total number of collapsed structures, significant damage could still be incurred by retrofitted buildings.
- Massive pre-1972 concrete buildings and structures can be expected to experience more damage than similar buildings with more recent designs that incorporate steel reinforcement (EERI, 1986). Pre-1971 commercial buildings with tilt-up concrete construction, if not retrofitted, are also prone to structural damage, especially if subject to foundation distress because of liquefaction. Both near-field and far-field earthquakes can damage non-ductile or tilt-up concrete buildings, the extent of the damage depending on the size and shape of the structure.
- Pre-1972 multistory buildings with a structural design weakness in one or more floors (soft-story) would sustain significant damage, or even collapse (EERI, 1986) as the result of a significant earthquake.
- Houses built before the 1952 Uniform Building Code was implemented and have not been rehabilitated are more likely to slip off their foundations as a result of strong ground shaking. Near-field earthquakes will generate the strong ground shaking associated with this type of damage.

Earthquake Hazard Mitigation

The City of Burbank is a heavily urbanized community covering an area of approximately 17.1 square miles. Except for hillside areas, most of the City is fully developed. Urbanized land uses include low- to

high-density residential, industrial and general manufacturing, and various types of commercial development. There are several hazard reduction techniques which can be used in the City of Burbank. The following are planning tools that already are or can be employed in Burbank to deal with seismic and related hazards:

- Building and Fire Codes Enforcement
- Seismic Overlay Zoning
- Building Safety-- Hazardous Building Abatement
- Hazard Reduction Incentives
- Lifeline (infrastructure) Development Standards
- Real Estate Disclosure
- Post-Earthquake Reconstruction Ordinance or Policy
- Public Education

Building and Fire Codes Enforcement

Burbank, as most of southern California, is located in Seismic Zone 4 of the Uniform Building Code (UBC) which has the most restrictive regulations. The project design and review provisions and performance standards defined in the Uniform Building and Fire codes constitute hazard reduction measures that are incorporated into all new developments. The State of California prescribes mandatory seismic hazard provisions in the Uniform Building Code. For the most part, these guidelines exemplify performance standards and procedures developed by the International Conference of Building Officials (ICBO). Seismic guidelines have their origin in recommendations developed by the Structural Engineers Association of California (SEAOC) and by Applied Technology Council, a federally-subsidized research group. Local governments must amend their regulatory codes to conform with state requirements every three years. Technically, according to state law, local governments may adopt more stringent code standards only when based on special needs posed by extraordinary, climatic, geographic, or topographic circumstances unique to the jurisdiction.

The UBC defines special standards for the structural design of critical, essential, and hazardous facilities, including requirements for dynamic analyses, using response spectra and time histories of specific sites. The UBC also provides a framework for efficient use of probabilistic analyses. Combined with newly revised static force procedures for conventional development, these structural design analyses offer practical, state-of-the art techniques for modeling dynamic earthquake forces. Special fault and liquefaction investigations and design standards for future development and redevelopment can be implemented by local governments to augment Building Code provisions in specially delineated hazardous areas.

Effective enforcement of the Building Codes must be supported by suitable in-house technical expertise responsible for project review to verify compliance with seismic design standards.

Building and fire codes are not retroactive unless specifically indicated or in the case of a life/safety issue. Seismic hazard reduction measures can be used to increase the safety of existing development. Hazard reduction measures range from immobilization of gas-fired heaters to retrofitting or strengthening of buildings or structures. Those programs can be encouraged through special tax

incentives, special development waivers for appropriate renovation, reduced legal liability or public recognition.

The UBC requires the reinforcement of masonry structures. In Burbank, most structures of this type are concentrated in the downtown Burbank Village area. In 1990 Burbank City Council passed an ordinance which includes standards and regulations to classify and bring these structures into compliance. The Community Development Department, Building Division, is responsible for a comprehensive compliance and monitoring system. The program called for code compliance for high risk buildings by December 1991 and for lower risk buildings by April 1993. Almost all of the 51 buildings identified have been brought into compliance. As an incentive to compliance, plan check and inspection services were offered to property owners free of charge. Very few structures remain which are not in compliance with seismic safety standards.

Seismic Hazard Overlay

Zoning codes prescribe permitted land uses within delineated districts or zones. Building height and setbacks, building bulk, lot coverage, density, and types of allowed land use activities are defined for these districts. Although applicable only to future development, zoning overlays can be administered to provide supplemental seismic standards and regulations for existing development and redevelopment, particularly infilling of the existing urbanized areas and in areas where special seismic risks have been or will be identified. Special earthquake hazard reduction standards are designed to operate in addition to existing zone provisions. Burbank does not make use of a special seismic hazard overlay, but rather enforces the UBC Citywide. Should the Verdugo Fault be proven to be active and the area designated as a Alquist Priolo Special Study Zone, a seismic hazard overlay would be appropriate for this area.

Safety provisions for fire or flood hazards, which in many cases are coincident with, or may compound, earthquake hazards, can be included into an overlay. This comprehensive approach can increase public awareness and promote overall safety. A zoning overlay can also be applied to existing development, such as abatement of structural and nonstructural building hazards. Incorporation of density restrictions and/or requirements for fire resistive construction standards into project approval offers a proactive strategy to curb fire hazard concerns created by an increasingly dense urban development. Density limits and restrictions on types of sensitive land use (dependent care populations) might also be developed in dam inundation areas.

Subdivision review procedures can impose many of the hazard reduction measures listed in Figure 19 on new development. Seismic overlay hazard reduction standards are well suited to redevelopment. Hazard reduction actions could be handled with minimal impact through existing performance review programs. To operate retroactively for existing development, an abatement schedule and appropriate hazard mitigation plans would need to be developed. Under one option, the overlay could require structures to come into conformity within a specified amortization period. The length of the period would vary according to the scale of rehabilitation cost or the sensitivity of the building i.e., high-occupancy, dependent care population, etc. Under another plan, conformity could only be required if and when the nonconforming structures were proposed for substantial renovation.

Building Safety - Hazardous Building Abatement Programs

A hazardous building abatement ordinance aimed at pre-1934 unreinforced masonry (URM) buildings has been successfully implemented in the City of Burbank. Mandatory abatement programs provide the City with a tool to address structural and nonstructural seismic deficiencies in other known potentially hazardous buildings.

A hazardous building abatement program is well suited for Citywide application because it has a high potential for improving overall safety. Such a program can be tailored to employ rehabilitation, occupancy reduction, or seismic safety actions such as immobilizing gas-fired appliances and installing fire sprinkler systems. Varying amortization periods, using either voluntary or mandatory schemes, offer a series of alternatives for the wide range of building types and ages, and for the accompanying risks posed by hazardous structures.

As URM buildings are retrofitted or demolished as part of a seismic hazards reduction program, the state may eventually require other potentially hazardous non-URM buildings to be identified and abated.

A hazardous building inventory and structural screening program as well as a penalty system for noncompliance are important parts of any hazardous building abatement program. The City identified 51 pre-1934 URM buildings as part of its hazardous building abatement ordinance, but other building types may also pose a seismic hazard. Varying amortization periods for buildings of different risk represents one successful method that has been applied in some jurisdictions. Other jurisdictions have waived floor area restrictions on infilling if seismic retrofit action is undertaken for the existing structure. Deferring potential liability to building owners and carefully crafting penalties for noncompliance are other components of an effective program.

A hazardous building abatement program directed specifically at structures housing critical facilities is another option. Permit procedures and building regulations could be adopted which would apply to the various types of critical facilities. The requirements would vary according to the intended use of the facility, such that, for example, highest risk facilities (such as chemical processing plants) would require a more detailed investigation than a lifeline system facility.

Hazard Reduction Incentives Programs

Incentives offer a voluntary hazard reduction technique for existing development. Incentives provide the public sector with immediate or short-term rewards for long-range earthquake hazard mitigation and/or preparedness actions. Tax incentives, protection against owner legal liability (building owners who make no reasonable provisions to mitigate recognized seismic hazards may be made legally liable for damages to life if someone in the building is hurt during an earthquake), or public recognition for rehabilitation of potentially hazardous buildings are some examples of hazard reduction incentives that have been employed to encourage the abatement of potentially hazardous buildings. Granting expedient building permit processes for appropriate renovation or redevelopment is another alternative for promoting hazard reduction action.

A comprehensive hazardous building abatement program can be implemented to require voluntary or mandatory strengthening of high-risk structures, or to reduce the building's maximum occupancy to a level that coincides with the risk posed by the structure. Additional programs can be developed to promote seismic safety actions which reduce risk, like immobilizing gas-fired appliances, encouraging early warning gas shutoff systems in areas of liquefaction, strengthening residential foundation/frame components, etc. Incentive programs may be best applied as a component of a comprehensive safety program.

Seismic Retrofit Ordinance

In late 1998, the City of Burbank implemented a Seismic Retrofit Ordinance that necessitated work on several city-owned buildings. The implementation process was divided into three phases:

Number of Buildings	Findings and Recommendations
13	**Buildings where evaluation of entire lateral load resisting system is recommended**. This includes non-ductile concrete buildings and buildings with obvious significant seismic safety risks associated with overall lateral load resisting system.
14	**Buildings where additional evaluation or field verification of a portion of the building is recommended**. This includes evaluation of concrete and masonry walls anchored to flexible diaphragms, evaluations of wood frame cripple walls and field verification of wood frame wall anchorage to foundation.
3	**Buildings where recommendations for removal or strengthening of non-building system is recommended.** This includes recommended removal of rubble masonry at the Izz Park Theater and the evaluation of the independent trellis between the Starlight and Mountain View Room buildings.
9	**Small masonry restroom buildings with low risk and for which no further action is recommended.** These buildings have masonry walls and technically fall within the "Concrete and Masonry Walls Anchored to Flexible Diaphragms" ordinance. However, due to their size and configuration, the risks associated with wall anchor failure are low; therefore, we recommend no action for these buildings. Building department concurrence with this recommendation is needed.
7	**Buildings for which no further action is needed.** Includes a building for which none of the ordinances apply, wood frame buildings without cripple walls constructed after 1939 and buildings with masonry walls that have been recently retrofitted with wall anchors.

Should be “Izay” Park

Phase 1 – Preliminary Investigation and Evaluation

This phase included a licensed structural engineering firm's services for visiting each potentially hazardous building, determining the type and identifying which buildings are within the scope of the retrofit ordinances. For the purposes of this study, any building constructed prior to 1980 was considered potentially hazardous.

In January, 1999, the study was completed by Brandow & Johnston Associates of Los Angeles. In the final report, 46 buildings were investigated. The findings are listed in the following table:

Each building was assigned a risk level A, B, or C. Risk level A has the highest risk associated with seismic activity and C the least. These risk levels were approximate and were based on the engineer's assessment of the quality of the seismic load resisting systems, the type of structure, severity of risk associated with the structure type, and the occupancy of the structure. These risk levels were intended to assist in assigning relative priority among buildings in the evaluation and retrofit program and not as any assessment of overall seismic safety. The table below summarizes the risk levels assigned to the 46 buildings:

Risk Level	Number of Buildings with this Risk Level
A (highest risk)	6
B	20
C (lowest risk)	20

The buildings are detailed in the report B&JA No. 98527, "Phase 1 Seismic Survey of Burbank's Municipal Buildings", published January 12, 1999.

Phase 2 – In-depth Evaluation of Structures Found to be Within the Scope of Ordinances

This phase included a more in-depth field investigation and an engineering evaluation to determine if retrofit was needed. If it were required, conceptual retrofit plans and cost estimates were developed. The buildings needing retrofit were also rated as to level of risk in order to prioritize retrofit of the most hazardous buildings.

In September 2002, the City hired the same structural engineering consulting firm, Brandow & Johnston Associates, to complete the project at a cost of $200,000.

The following 10 facilities were included in this phase:

1. McCambridge Recreation Center
2. Fire Station #16
3. Olive Recreation Center
4. Northwest Library
5. Field Services Administration
6. Refuse Locker Room
7. DeBell Club House
8. Police Pistol Range
9. Water Reclamation
10. Verdugo Recreation Center

Phase 3 – Development of Retrofit Construction Documents for Structures

This final phase was to develop plans and specifications for buildings needing retrofit. This phase was broken down into several sub-units for management and budgetary reasons. A bid package for phase 3A was prepared and posted on July 30, 2004 "City of Burbank Citywide Seismic Retrofit Phase 3A Bid Schedule No. 1159 Bid Set," and has yet to be awarded. The City requested 12 bids and, thus far, has received 2. The following is a breakdown of Phase 3 into a Probable Cost Summary for 28 buildings:

DECEMBER 2004 PROBABLE COST SUMMARY FOR 28 BUILDINGS

12/14/2004 9:20am

C:\DOCUME~1\User\LOCALS~1\Temp\[12-14-04 Probable Costs.xls]Probable Cost for 12-04 Budget

Bldg Num	Description	SqFt	Prob. Unit Constr. Cost	Probable Construction Cost	Probable A&E and Inspection Percentage	Probable A&E and Inspection Costs
Phase 3A Group 1 Buildings						
68	Fire Station No. 16	5,907	125.01	738,450	6%	44,307
49	Police Pistol Range	3,367	99.34	334,475	6%	20,069
17	Field Services Administration	47,048	5.67	266,750	6%	16,005
98	Water Reclamation Administration	10,000	46.58	465,775	6%	27,947
19	Refuse Locker Room	1,510	97.52	147,250	6%	8,835
45	Starlight Amphitheater	8,827	16.33	144,115	6%	8,647
		76,659		2,096,815		125,809
Phase 3A Group 2 Buildings						
1	McCambridge Recreation Center	34,601	24.00	830,424	6%	49,825
4	Verdugo Recreation Center	18,800	40.00	752,000	6%	45,120
7	Olive Recreation Center	20,347	50.00	1,017,350	6%	61,041
		73,748		2,599,774		155,986
Wood Frame & Special Evaluations						
2	McCambridge Lower Assembly Building	3,292	8.00	26,336	na	7,500
9	Izay Park Theater	3,013	8.00	24,104	na	7,500
13	Buena Vista Library	8,055	12.00	96,660	18%	17,399
42	Starlight Room Trellis	na	na	50,000	20%	10,000
46	Amphitheater Snack Bar	348	na	7,500	na	5,000
		14,708		204,600		47,399
Wall Anchor Plus Evaluate Critical Elements						
14	Northwest Library (Design Partially Complete)	6,653	40.00	266,120	12%	31,934
27	Valley Park Restroom	572	40.00	22,880	na	7,500
31	Johnny Carson Park Restroom and Storage	1,345	40.00	53,800	na	7,500
33	De Bell Driving Range	712	98.00	69,776	na	12,000
34	De Bell Cart Storage Building	2,352	40.00	94,080	23%	21,638
102	Water Reclamation #2	2,364	40.00	94,560	23%	21,749
		13,998		601,216		102,322
Wall Anchor Plus Full Evaluation						
15	Park Maintenance Supervisors Office	1,227	40.00	49,080	29%	14,233
16	Street Supervisors Office	1,035	98.00	101,430	29%	29,415
18	Building Maintenance and Park Storage	9,140	40.00	365,600	18%	65,808
20	Police Evidence	8,862	40.00	354,480	18%	63,806
40	De Bell Golf Maintenance Shed	2,708	40.00	108,320	23%	24,914
41	De Bell Golf Clubhouse	10,285	65.00	668,525	21%	140,390
		33,257		1,647,435		338,566
Other Buildings Needing Full Evaluation						
12	Central Library	43,760	50.00	2,188,000	14%	306,320
50	City Hall	42,462	75.00	3,184,650	14%	445,851
		86,222		5,372,650		752,171
	Total for 29 Buildings:		**Construction:**	**12,522,490**	**A&E and Inspection:**	**1,522,253**

Both construction and A&E costs are rough estimates and will vary depending on results of detailed seismic evaluations.

To keep the cost down, we have assumed that large groups of buildings are done at once (economy of scale). If we have to produce individual plan check/bid packages, the cost could increase.

Square footage based on City of Burbank Database.

The following table shows the summarizes the two bids thus far received:

Bid Schedule No. 1159 - City Wide Seismic Retrofit Construction

No.	Description	Est. Days to Complete	City's Requested Completed By	Perera Construction & Design Inc: Contractor's Completion Dates	Total	Fransisco J Pimera dba Acre Constructors: Contractor's Completion Dates	Total
	Start Date January 10, 2005						
1	Refuse Locker Room 124 S Lake St	61	3/11/2005	3/11/2005	$ 195,000.00	3/11/2005	$ 99,500.00
2	Starlight Amphitheater 1249 Lockheed View Dr	75	3/25/2005	3/25/2005	$ 173,000.00	3/25/2005	$ 115,225.00
	Start Date March 1, 2005						
3	Field Services – Public Works 124 S Lake St	122	6/30/2005	6/30/2005	$ 343,000.00	6/30/2005	$ 190,500.00
	Start Date May 1, 2005						
4	Water Reclamation Plant 2 Chestnut St	123	8/31/2005	8/31/2005	$ 623,800.00	8/31/2005	$ 307,750.00
5	Police Pistol Range 2244 Wildwood Canyon	92	7/29/2005	7/29/2005	$ 443,200.00	7/29/2005	$ 225,750.00
.	**TOTAL AMOUNT OF ITMES 1 To 5**				$ 1,778,000.00		$ 938,725.00
	Optional Buildings:						
	Start Date February 1, 2005						
A	Burbank Fire Station No. 16 - 1600 N Bel Aire Dr	242	9/30/2005	9/30/2005	811,200.00	9/30/2005	665,700

Full and Correct Name of Hazardous Abatement Subcontractor:

SUBCONTRACTOR'S NAME:	Karcher Environmental	Allied Environmental Services
CONTACT PERSON:	Campbell Scott	Alan Pulliam
TITLE:	Estimator	Project Manager
ADDRESS:	2300 E Orangewood Ave	4570 Van Nuys Blvd Suite 308
	Anaheim, CA	Sherman Oaks CA 91403
TELEPHONE NUMBER:	714-385-1490	818-781-2498
FAX TELEPHONE NUMBER:	714-385-1878	818-781-2490
Contractor's License & Class	585985 - B	787686 - B
Bidder's Bond	10% of total amount bid	$88,000.00 Does not meet 10% requirement

Once plans are developed and approved, a cost benefit/review will be conducted to determine the scope and timing for the construction, and the identification of funds necessary to complete the project.

Infrastructure/Lifeline Programs

The risk of the community being exposed to gas, sewer waters, and other leaks can be reduced if policies and plans are implemented requiring major lifelines to be located away from known hazardous areas, such as liquefaction-prone areas and active faults, in new developments. Such a policy can also be part of subdivision regulations. When feasible, this policy should be applied to existing lifeline systems through a retrofit, hazard reduction or relocation program. Such an action would reduce the risk of exposing the community to hazards, would ensure effective emergency specifications, and would promote prompt restoration of normal services in the event of an earthquake.

Alternative locations for existing lifelines in hazardous areas are constrained by right-of-way routes, jurisdictional law or property ownership.

The ability to control lifeline decisions may be limited; local jurisdictions can only petition major independent service utilities to undertake a more comprehensive lifeline safety program. Negotiations for performance standards need to consider potential increases in ratepayer costs.

Hazard reduction measures must also address the retrofit of gas-fired appliances and pipeline connections in private residential properties, which also pose the risk of post-earthquake fire. Public education programs that address these issues should be considered.

Real Estate Disclosure

The Alquist Priolo Special Studies Zone (APSSZ) Act requires California real estate agents and sellers to inform prospective home buyers if the property being sold is near the trace of an active fault rupture zone. California also requires the sellers of real estate to disclose any known defects including earthquake hazards. If the structure was built before 1960, the seller must give the buyers a copy of

"The Homeowners Guide to Earthquake Safety", a booklet prepared by the Seismic Safety Commission which contains information on geologic and seismic hazards, an explanation of structural and non-structural earthquake hazards and recommendations for mitigation of identified hazards. Informing potential buyers during real estate transactions is intended as a tool to increase public awareness and as an incentive to promote risk avoidance action. Risk avoidance may include actions to safeguard household utilities, structural or nonstructural strengthening, or purchase of earthquake insurance. Inasmuch as an APSSZ has not yet been designated for the Verdugo Fault or other faults in Burbank, the City may consider providing a more effective and comprehensive local disclosure process that would also include areas susceptible to liquefaction.

This type of disclosure would increase public awareness without increases in administrative costs; presumably the real estate board would monitor disclosure. The City could distribute information on voluntary hazard reduction alternatives for properties in these areas.

Local jurisdictions have only indirect control through delineating hazardous areas and requesting cooperation of real estate agents. Although real estate agents and sellers of property may oppose such action on the grounds that it may reduce resale options and increase the transaction costs, studies have shown that housing price trends are not affected by such real estate disclosures.

Post-Earthquake Reconstruction Ordinance

The purpose of a reconstruction ordinance or policy is to discourage inappropriate development from reoccurring in areas proven susceptible to high earthquake risks. Unacceptable earthquake risk may become evident in areas heavily damaged during an earthquake, depending on the nature and type of land use proposed for redevelopment.

Development regulations which have been prepared prior to a disaster, permit rational rebuilding decisions in the immediate aftermath of an earthquake disaster. If reconstruction of inappropriate facilities is allowed, the public may eventually absorb a large share of the repair costs and/or be exposed to excessive risks in future disasters. A balance must be achieved between the rights of property holders, and the local government's responsibility to minimize the high cost in economic losses or lives in areas exposed to extraordinary earthquake risks.

In 1995, the City Council adopted an ordinance which amended the Burbank Municipal Code to allow restoration of non-conforming buildings which were damaged or destroyed as a result of a local emergency or disaster. The amendment allows buildings which are non-conforming with regards to the existing City development standards, to be reconstructed.

Seismic Safety Policies

The overriding City of Burbank goal with regard to seismic safety is to PREVENT LOSS OF LIFE, MAINTAIN THE FUNCTIONING OF CRITICAL FACILITIES AND MINIMIZE PROPERTY LOSS AND DAMAGE. The following policies are intended to achieve this goal.

P1. Maintain close coordination between developers, consultants and responsible agencies to ensure compliance with state law with regard to geotechnical investigations to evaluate the liquefaction potential of sites in identified liquefaction prone areas or the recent movement of an identified fault.

> The liquefaction potential of a site should be evaluated when, during the course of a geotechnical investigation, shallow groundwater (50 feet or less) and unconsolidated sandy alluvium soils are found.

Fault investigations in the Verdugo Fault zone should be encouraged where feasible. The City's Building Division will determine the level of detail required in these investigations and the recommended building setback from the fault. The state geologist should be informed of any findings pertinent to the activity designation of the fault.

P2. Continue to require geologic investigations in hillside areas with slopes greater than 25 percent. Rights-of-way and cut slopes should be designed and built so as to prevent rockslides and maintenance problems that may compound evacuation procedures after an earthquake.

P3. Continue to enforce seismic design provisions of the current Building Code. Seismic design parameters for conventional development and critical facilities should be recommended by the site design engineer and approved by the City. The design parameters should be based on the importance of the structure to the community. The more conservative estimates of earthquake recurrence and intensity of ground motion shall apply to the design of critical facilities.

Continue to enforce dynamic analyses provisions of the current building code. Any proposals for critical facilities in the basin area of the City should require a site-specific investigation of the ground conditions to evaluate the potential of damaging site amplification occurring during an earthquake.

Continue to verify that new development complies with the Uniform Building Code (UBC) seismic design standards and the Burbank Municipal Code, by means of in-house expertise or consultation with a private structural engineer. Continue to verify that structural and architectural features, such as irregular building shapes, soft-stories, undefined structural systems, architectural elements, equipment attachments, etc., are designed in accordance with the seismic provisions of the Uniform Building Code and current professional structural engineering practices.

Hospitals, emergency facilities, high occupancy buildings and other types of critical facilities shall be designed to comply with the UBC seismic provisions.

P4. Review the following types of critical facilities proposed for development or expansion to ensure that identified hazardous conditions are mitigated or hazard reduction features are incorporated to the satisfaction of the responsible agencies.

Any lifeline system under the City's jurisdiction, such as power and water utilities, and roads that may serve as evacuation routes in an emergency.

Essential facilities needed in an emergency, such as hospitals, fire and police stations, emergency operation centers and communication centers.

High-risk facilities that, if damaged during an earthquake, may have an impact on the community far beyond the facilities themselves. These include dams, airports and industrial plants that use or store hazardous materials.

High-occupancy facilities such as high-rise buildings, large public or private assembly facilities and large multi-family residential complexes (with a capacity over 500 persons) which may be difficult to evacuate during an emergency, or which, if damaged as a result of an earthquake, can result in a large number of casualties.

Dependent care facilities housing populations with special evacuation considerations, such as preschools and public and private schools, rehabilitation centers, prisons and major social care facilities, including group care homes and elderly homes.

Economic facilities whose continued operation is paramount to avoid severe economic losses, such as banks, vital record keeping and archival facilities, computing and data processing centers, airports and railroad facilities, and large industrial and commercial facilities.

P5. Employ incentives whenever feasible to encourage the mitigation of existing hazardous structures and conditions. These incentives may include expedient building permits, waivers from development standards, public recognition or tax credits. Incentives should be considered in the following cases:

To encourage the siting of critical facilities in areas that are not of high seismic risk;

To retrofit structural and non-structural hazards in privately-owned potentially hazardous buildings, and to retrofit historical buildings to standards above those mandated by the State Historical Building Code;

To incorporate into existing and proposed critical facilities such preventive measures as fire-resistant materials, self-contained fire suppression features (such as sprinkler systems or gravity water flow lines in mountainous areas), on-site evacuation and contingency plans, back-up lifeline capabilities, etc.;

To restrain gas-fire appliances and other non-structural elements that may pose a hazard if moved or tumbled during an earthquake.

P6. Consider the inclusion of seismically high-risk buildings--such as those with masonry-infilled walls, soft stories, non-ductile concrete frames, tilt-up concrete construction, and woodframe cripple wall construction--in the City of Burbank seismic retrofit ordinance. This would require the identification of these buildings, followed by implementation of a mitigation program.

P7. Encourage and facilitate the retrofitting of bridges and highway structures in the City of Burbank in coordination with the County of Los Angeles Department of Public Works and the California Department of Transportation.

P8. Promote the maintenance and development of seismically resistant lifeline systems to ensure their continued function, to expedite post-earthquake repairs and to have emergency back-up capabilities. Emphasize the following:

Promote the use and maintenance of back-up power generators in critical facilities such as group care homes, day care and other health care facilities, and in emergency and high risk facilities such as the Burbank-Glendale-Pasadena Airport, schools and other sites that are likely to be used as shelters; and

Advocate the continued review and mitigation, if necessary, of natural gas and petroleum pipelines, and other pipelines used to transport hazardous substances, especially if located in areas of high seismic risk.

P9. Promote the development of community or neighborhood disaster relief groups, and workplace self-help groups, to improve the effectiveness of local emergency response, light search and rescue and emergency medical care teams. Existing associations such as homeowner groups, neighborhood watch programs, or new organizations created for earthquake relief purposes can serve as auxiliary emergency response teams to aid the public and non-profit organizations responsible for such actions as first aid, shelter, traffic control, light search and rescue and utility shut-off.

P10. Require a disclosure clause for any property transaction for a site located in an identified seismically hazardous area. The disclosure clause, provided by the Real Estate Commissioner, includes those hazards identified during the site investigation, and a verification of the hazard mitigation measures applied as a condition for project approval.

P11. Consider development of a geographic information computer system (GIS) with computer-aided design and drafting (CADD) capability to streamline the process of reviewing projects and to manage safety information, such as the following:

Existing and future geotechnical and seismic data contained in public, private and City archives, including the California Division of Mines and Geology, the Environmental Protection Agency, the Department of Water and Power, Lockheed, etc.

The locations and details of hazardous structures, critical lifelines and critical facilities. Data about these facilities should include the building's age, function, occupancy and structural risk.

A listing of disaster response plans and resources available so these can be implemented immediately in case of emergency.

An overlay of seismic constraints to assist in emergency response planning.

P12. Formulate a post-earthquake reconstruction policy. The policy should include a provision requiring that rebuilt facilities, especially critical facilities, in the areas impacted the most by liquefaction or surface fault rupture, be designed to withstand those specific types of seismic activity. The post-earthquake reconstruction policy should also include provisions by which services provided by the Federal Emergency Management Agency, the State Office of Emergency Services, and other responsible agencies and local jurisdictions are expediently coordinated to assist in the provision of housing for dislocated residents.

Transportation Accident

Transportation Incidents were rated a HIGH PRIORITY HAZARD in the City of Burbank.

Because of the tremendous volume of transportation (commercial and private) into and out of LA County, the potential for a disastrous transportation-related event exists. Generally, transportation accidents are incidents that are handled by local jurisdictions or by jurisdictional mutual aid responses. A transportation accident, combined with a volatile hazardous substance or a large number of people, has the potential for becoming an event that requires a major mobilization of local, county, state and federal agencies.

According to the Department of Transportation, from 1994 to 2000 there were more than 1,800 fatal tractor-trailer accidents in the state, and from 1990 to 2001 more than 4,200 train accidents.

Aircraft Incidents

Airline crashes are listed as a less significant hazard because individually they are less likely to result in a state or federal disaster declaration. However, State OES recognizes the severity of these incidents as they often lead to deaths and injuries.

Airline(s)/Flight	Location	Airline(s)/Flight	Location
South West 1455	Burbank	Swift Air Lines, Inc.	Marina Del Rey
Phoenix Air 35A	Fresno	Pacific Southwest Airlines	San Diego
USAIR 1493/Skywest 5569	Los Angeles	Continental Airlines	Los Angeles
Bell	Alamo	Jet Aviation, Ltd.	Palm Springs
North Star/Cessna	Oakland	Mercer Airlines	Van Nuys
Aero naves De Mexico/Piper	Cerritos	Golden West Airlines	Whittier
China Airlines	San Francisco	Sierra Pacific Airlines	Bishop
Western Helicopters	Valencia	Trans World Airlines	Los Angeles
McDonell Douglas Corp.	Edwards AFB	Spectrum Air, Inc.	Sacramento
Air California 336	Orange County	Trans World Airlines	San Francisco

Most Recent Accident

On March 5, 2000, at about 1811 hours Pacific standard time (PST),[1] Southwest Airlines, Inc., flight 1455, a Boeing 737-300 (737), N668SW, overran the departure end of runway 8 after landing at Burbank-Glendale-Pasadena Airport (BUR), Burbank, California. The airplane touched down at approximately 182 knots, and about 20 seconds later, at approximately 32 knots, collided with a metal blast fence and an airport perimeter wall. The airplane came to rest on a city street near a gas station off of the airport property. Of the 142 persons on board, 2 passengers sustained serious injuries; 41 passengers and the captain sustained minor injuries; and 94 passengers, 3 flight attendants, and the first officer sustained no injuries. The airplane sustained extensive exterior damage and some internal damage to the passenger cabin. During the accident sequence, the forward service door (1R) escape slide inflated inside the airplane; the nose gear collapsed; and the forward dual flight attendant jump seat, which was occupied by two flight attendants, partially collapsed.

The National Transportation Safety Board determines that the probable cause of this accident was the flight crew's excessive airspeed and flight path angle during the approach and landing and its failure to abort the approach when stabilized approach criteria were not met. Contributing to the accident was the

controller's positioning of the airplane in such a manner as to leave no safe options for the flight crew other than a go-around maneuver.

Rail Incidents

The City of Burbank has dealt with recent rail accidents. Recently there was a freight derailment near Andrew Jergens resulting in damaged track, roadbed and adjacent property. There were no deaths or injuries.

An incident involving an MTA Metrolink Train occurred near San Fernando Boulevard and Buena Vista resulting in injuries and fatalities.

The most recent event occurred in nearby Glendale on January 26, 2005. The Associated Press Release is below:

> **GLENDALE, Calif. --** A suicidal man parked his SUV on the railroad tracks and set off a crash of two commuter trains Wednesday that hurled passengers down the aisles and turned rail cars into smoking, twisted heaps of steel, authorities said. At least 10 people were killed and more than 180 injured.
>
> The collision took place just before daybreak on the outskirts of Los Angeles, creating a scene of carnage: Employees at a Costco store rushed to the scene and pulled riders from the tipped-over double-deck cars before the flames reached them. Dazed passengers staggered from the wreckage, some limping. One elderly man on the train was covered in blood and soot, his legs and arms apparently broken.
>
>
>
> "I heard a noise. It got louder and louder," said passenger Diane Brady, 56. "And next thing I knew the train tilted, everyone was screaming and I held onto a pole for dear life. I held on for what seemed like a week and a half it seemed. It was a complete nightmare."
>
> Dozens of the injured were in critical condition, and more than 120 people were sent to hospitals.
>
> The wreck set in motion a huge rescue operation involving more than 300 firefighters, some of whom climbed ladders to reach the windows of the battered train cars. A triage center was set up in a parking lot, where the injured lay sprawled on color-coded mats - red for those with severe injuries, green for those less seriously hurt.
>
> Authorities said the nation's deadliest rail disaster in nearly six years was caused by an aborted suicide attempt by a man who parked his sport utility vehicle on the tracks. Police said he changed his mind and got out of the vehicle before a Metrolink train smashed into it.
>
> The train then derailed and collided with another train going in the opposite direction. That train also jumped the tracks. Manuel Alvarez, 25, of Compton, was arrested and will face homicide charges, Police Chief Randy Adams said. Alvarez had also slashed his wrists and stabbed himself, but the injuries were not believed to be life-threatening, authorities said. Adams said Alvarez had a criminal record that involved drugs.

"This whole incident was started by a deranged individual that was suicidal," Adams said. "I think his intent at that time was to take his own life but changed his mind prior to the train actually striking this vehicle."

The crash occurred at about 6 a.m. in an industrial area of Glendale, a suburb north of Los Angeles. One train was headed for Los Angeles' Union Station from Moorpark, a western suburb. The other train was outbound from Union Station to the San Fernando Valley.

About a dozen employees from the Costco ended up playing an important part in the rescue after hearing the thunderous collision.

Costco employee Jenny Doll said trapped passengers - some severely injured - screamed for help as flames raced toward the front of the train car and smoke and diesel fumes filled the air. Forklift operators, truck drivers and stock clerks worked side-by-side to pull victims out, using store carts to wheel some of the most severely injured to safety.

"There were people stuck in the front. Everything was mangled," Doll said. "You could not even tell that it was a train cab at all." Anguished relatives rushed to the area to find out what had become of their loved ones.

George Touma, 19, said he was called by his mother, who was on one of the trains.

"She told me she was bleeding in the head and her arm was really hurting," said Touma, who searched for her. "I'm really worried because she has vertigo and when I tried to call back she wouldn't answer."

It was the worst U.S. rail tragedy since March 15, 1999, when an Amtrak train hit a truck and derailed near Bourbonnais, Ill., killing 11 people and injuring more than 100.

Investigators from the National Transportation Safety Board and Federal Railroad Administration were sent.

"The magnitude of the incident requires a large team," Transportation Department spokesman Robert Johnson said.

Hugo Moran, one of Costco employees who rushed to the wreck, could not fathom the suicide attempt.

"There's a lot of ways to do it without hurting someone else," Moran said. "Was he mad at himself or mad at the world? I don't understand it."

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Trucking Incidents

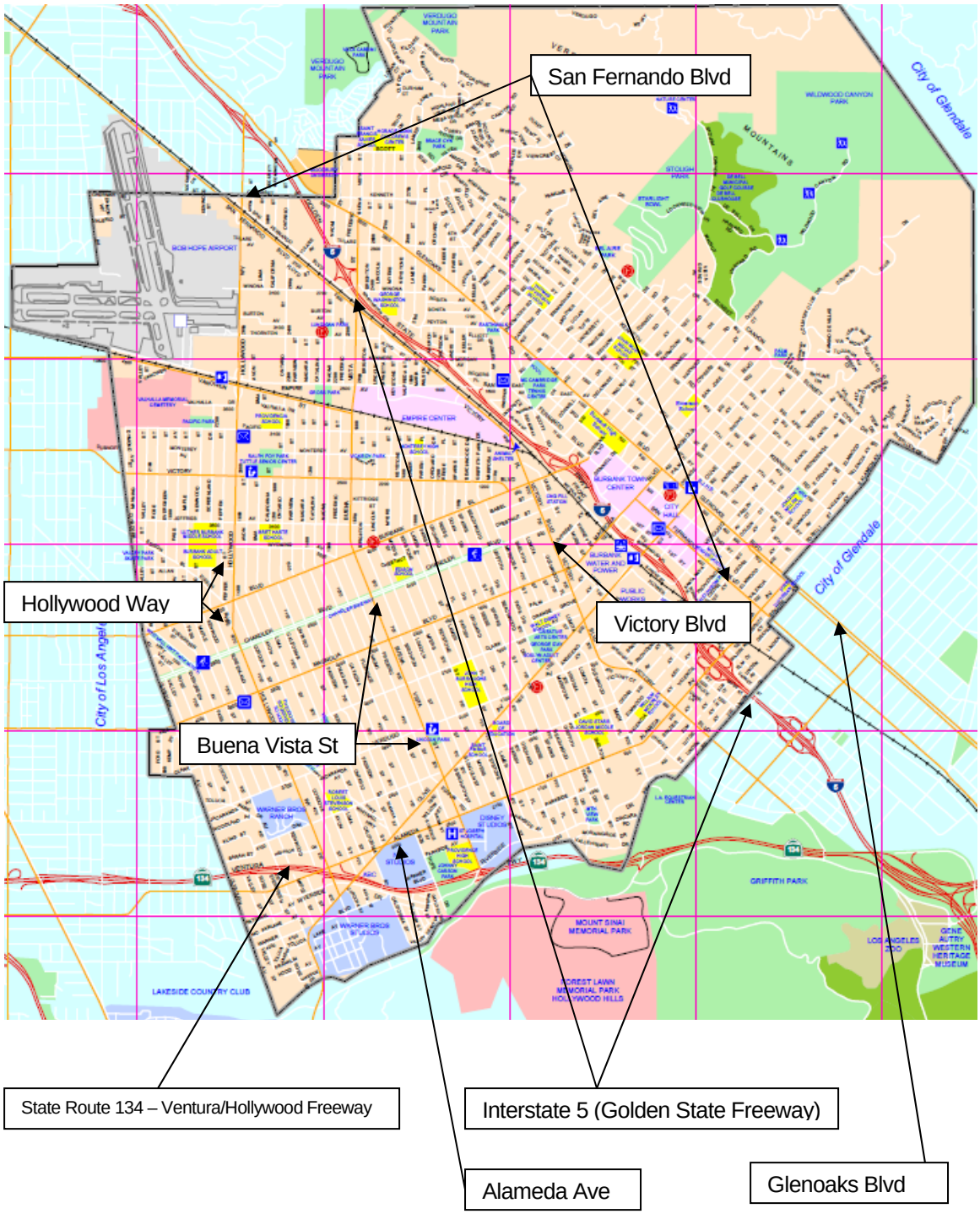
A major truck incident that occurs in a heavily populated industrial area or residential area can result in considerable loss of life and property. When a truck is involved in an accident, there is no longer control as to the direction the truck will travel. Potential hazards could be overturned tank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

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

Specific Situation

The City of Burbank is located within the central section of Los Angeles County. It is served by two major freeways and several major north & south truck routes. The city has numerous narrow and winding streets many of which have a 5% or greater grade. The potential for a truck accident due to a mechanical failure or loss of control is significant.

Major Truck Routes Maps



Highway Incidents

On any given day, Los Angeles County highways have thousands of large trucks carrying all sorts of cargos (including hazardous materials). The potential for a highway accident involving one or more trucks carrying volatile cargo is great. Generally, these accidents are handled as incidents by the appropriate jurisdiction; however, because of the dense population and shear volume of vehicular traffic, the risk of a crash becoming a catastrophic event grows.

In 2001, 429,000 large trucks (gross vehicle weight rating greater than 10,000 lbs.) were involved in traffic crashes in the United States: 4,793 were involved in fatal crashes. A total of 5,082 people died (12 percent of all the traffic fatalities reported in 2001) and an additional 131,000 were injured in those crashes.

In 2000, large trucks accounted for 4 percent of all registered vehicles and 7 percent of total vehicle miles traveled (2001 registered vehicle and vehicle miles traveled data not available). In 2001, large trucks accounted for 8 percent of all vehicles involved in fatal crashes and 4 percent of all vehicles involved in injury and property-damage-only crashes.

According to a 1999 study performed by the FMCSA (*Cost of Large Truck- and Bus-Involved Crashes*), the average cost per crash involving a large truck is $75,637. With 429,000 large truck-related crashes in 2001, the total monetary expense for 2001 is minimally $32,448,273,000.00 using 1999 cost estimates.

Chain reaction accidents on crowded interstate highways that intertwine Los Angeles County are also another consideration. These events can quickly grow into localized disasters that overstrain local responders. Potentially, they could expand into catastrophic incidents involving hazardous materials, mass casualties, fire, and transportation disruption. Depending on the occurrence, the response could involve mass evacuation, mutual aid and other aspects of managing a disaster.

Transportation Loss

Transportation Loss was rated a HIGH PRIORITY HAZARD by the City of Burbank.

Transportation disruption and loss in Burbank and the surrounding area could 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, including Burbank, 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.

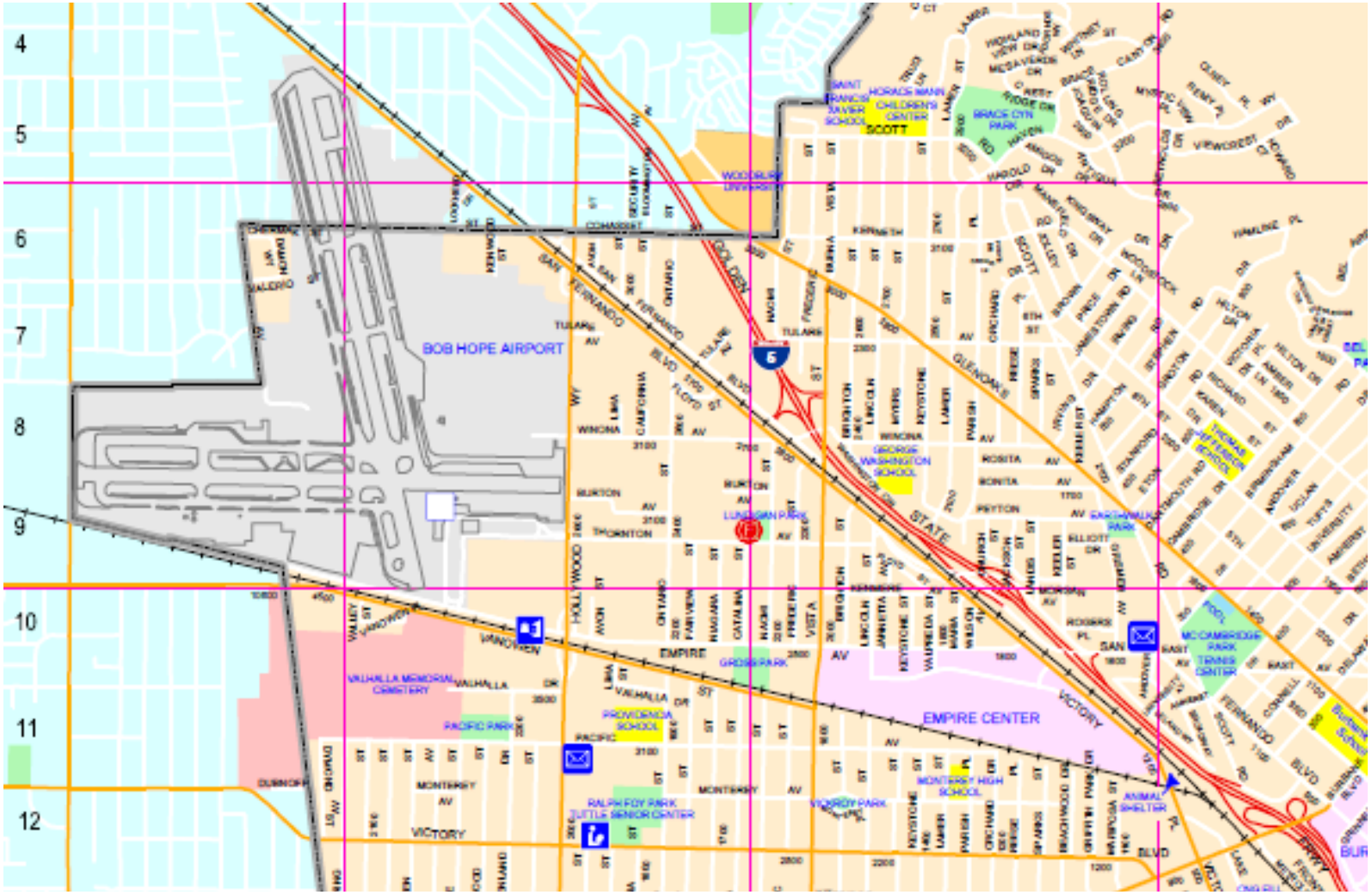
Roads, Road Miles, Motor Vehicles, & Drivers in L.A. County

- 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

Transportation Map 1 – North Burbank



Transportation Map 2 – South Burbank

Mass Transit

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/Southern 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

Wild Land/Urban Interface Fires

Wild Land/Urban Interface Fires were rated as a HIGH RISK by the City of Burbank.

Levels of Wildland Fire Protection Services

The history of California wildfires indicates that the following trends will continue. Risk from wildfire to life, property, natural resources, and firefighter safety is increasing.

- Population will grow and more people will live and use wildland areas, especially in the Central Sierra and in the Southern California counties of Riverside, San Bernardino and San Diego.
- Topography and climate support ecosystems where large wildfires can be expected.
- Drought and fuel moisture conditions will be unpredictable but almost always dangerous in fire season.
- More structures will be constructed in areas that are very susceptible to wildfire.
- Historical legacy of narrow roads, difficult entrance, insufficient water supplies, flammable building construction and location that make many communities and homes wildfire-prone still exits.
- Public demand for wildland fire protection and other services will increase.

Deteriorating forest health, increasing fuel loads and other factors have led to more intense, destructive wildfires; unabated this pattern will continue.

Assets at risk will increase, especially watershed assets, because of the rapid rise in the demand for water to supply more people. Based on population projections, the potential for accelerating loss of protected assets, especially life and property, will be greater from disastrous wildfires.

Large wildfires do not respect political or property boundaries. Historically, a strength of California's firefighting agencies is found within a concept of mutual cooperation at the federal, state, and local levels of government. Day-to-day mutual aid for initial attack, as well as a statewide mutual-aid system for fire disasters, is the basis of this cooperation and coordination. The ability to rapidly mobilize, effectively deploy and support large numbers of specialized firefighting resources is essential to cope with large multiple fires. Hence, CDF, in cooperation with other fire agencies, must maintain infrastructure, including communications and capital improvements necessary to facilitate such a response.

Fire protection forces in California must have sufficient depth to respond to large, multiple wildfires and still prevent other small fires from becoming large damaging fires. CDF plays a key role in supplying and coordinating such forces; it should maintain and enhance this ability. The 1985 Fire Plan includes a model to provide adequate depth of resources that show CDF needing 96 additional engines and 825 personnel for managing large fires using the Incident Command System. There is a greater need today as reflected in the California Fire Plan.

California Fire Plan 2003

Wildland Fire Protection Fiscal Issues

Multi-year fiscal problems are occurring at all governmental levels, constraining the availability of funding to address the increasing workload, costs and losses of the California wildland fire protection system.

The increasing number of structures and people in California wild lands and the growing importance of the state's natural resources create a growing demand to fund additional wildland fire protection services for both the structures and the wildland resource assets.

The primary fiscal responsibilities for the initial attack responsibilities: (1) for federal wildland fire protection are the federal taxpayers, (2) for privately owned wildland fire protection are the state taxpayers, and (3) for structure fire protection in wildland areas are the local taxpayers. However, during the annual fire season, the state and federal taxpayers provide a minimum level of structural fire protection that is incidental to their primary missions of wildland fire protection. Similarly, in most wildland areas, local taxpayers provide year-round wildland fire protection on both state and federal responsibility areas that is incidental to the local government primary mission of structural fire protection.

Over the last decade, part of the increased costs for additional initial attack wildland resource protection and structural protection have been funded by local taxpayers through property taxes, fire district fees and volunteer firefighters. However, when a wildland fire overwhelms local resources and reaches a major fire status, both the state and the federal taxpayers pay for the costs of wildfires, structure protection, and the resulting disaster relief.

For the local taxpayers, the following continue to increase: (1) the structural values and number of people being protected on wild lands, (2) the costs of wildland and structure initial attack fire suppression funded at the local levels, and (3) the losses from the extended attack and larger fires.

For state and federal taxpayers, the following will continue to increase: (1) extended and large fire emergency fund expenditures for wildland fires, (2) protecting structures during initial attack and extended attack fires, and (3) state and federal agency disaster expenditures for damages to wildland resources and structures.

Health and Safety Code Section 13009 allows for recovery of fire suppression costs which, when obtained, be placed back into the state's general fund rather than invested in a pre-fire management program.

There is a direct relationship between reduced expenditures for pre-fire management and suppression and increased emergency fund expenditures, disaster funding, and private taxpayers expenditures and losses. Reduction of pre-fire management or suppression resources allows more fires to become major disastrous fires. Major fires create additional suppression and disaster relief costs at all levels of government and increase citizen and business losses.

According to representatives of the insurance industry that insures structures in California wildland areas, (1) the insurer average costs and losses are about $1.09 for each $1.00 received in premiums, and (2) the urban dwellers are subsidizing the wildland homeowner through service-wide rating schedules.

Fire-Safe and Land Use Planning

Population increases in wildland areas have raised strategic concerns about wildfire protection. Clearance laws, zoning, and related fire safety requirements implemented by state and local authorities need to address these factors:

Fire-resistant construction standards: We can no longer view a wildland fire as affecting only watershed, wildlife and vegetation resources; we must now consider their effect on people and their structures. Further, this increase in people and structures have provided increasing ignition sources for fire which, due to their proximity, can spread into the wildland. Building construction standards that encompass such items as roof covering,

opening protection and fire resistance are designed to both protect the structure from external fires and to contain internal fires for longer periods.

Hazard reduction near structures (defensible space): The public image of defensible space as part of pre-fire management should be expanded to include such immediate benefits as improved aesthetics, increased health of large remaining trees and other valued plants, and enhanced wildlife habitat. The use of defensible space that provides landscape naturalness, along with its compatibility with wildlife, water conservation and forest health, should be emphasized.

Infrastructure: Effective fire protection in the intermix cannot be accomplished solely through the acquisition of equipment, personnel and training. The area's infrastructure also must be considered during the formulation of development plans. Specific fire hazard areas should be evaluated and reasonable safety standards adopted, covering such elements as adequacy of nearby water supplies, routes or throughways for fire equipment, addresses and street signs, and maintenance. The ultimate objectives for fire-safe planning and construction are (1) improve the ability of communities and other high value assets that will survive a large, high intensity wildfire with minimal fire suppression effort and (2) provide for improved citizen and firefighter safety.

California Fire Plan 2003

Fire History

Large Fires (over 300 acres) in 2003

	%			DATE		ORIGIN	ACRES BURNED			VEG.		STRUCTURES		FATALITIES	
INCIDENT #	CONT.	COUNTY / UNIT	FIRE NAME	START	CONT.	DPA	CDF	OTHER	TOTAL	TYPE	CAUSE	DEST.	DAM.	FIRE	CIVIL
LAC-0300429	100%	Los Angeles	Pacific	1/6/2003	1/8/2003	CC	1300		1300		Under Inv.				
LAC-150988	100%	Los Angeles	Hauser	07/24/03	07/27/03	CC	2,044		2,044	B	Under Inv.	0	0	0	0
LAC-03220027	100%	Los Angeles	Verdale	10/24/03	10/28/03	CC	8,650		8,650	GB	Under Inv.	1	0	0	0
ANF-4490	100%	Los Angeles	Padua	10/21/03	11/02/03	USFS		10,446	10,446	B	Human	59	0	0	0
ANF-3468	100%	Los Angeles	Alamos	08/23/03	08/26/03	USFS		300	300		Under Inv.	0	0	0	0
ANF-003154	100%	Los Angeles	Middle	08/07/03	08/09/03	USFS		300	300	BT	Under Inv.	0	0	0	0

CDF Statistics

20 Largest California Wildland Fires by Structures Destroyed

	FIRE NAME/*CAUSE*	DATE	COUNTY	ACRES	*STRUCTURES*	DEATHS
1	TUNNEL *(REKINDLE)*	October 1991	ALAMEDA	1,600	2,900	25
*2	CEDAR *(HUMAN)*	October 2003	SAN DIEGO	273,246	2,820	15
*3	OLD *(HUMAN)*	October 2003	SAN BERNARDINO	91,281	1,003	6
4	JONES *(UNDETERMINED)*	October 1999	SHASTA	26,200	954	1
5	PAINT *(ARSON)*	June 1990	SANTA BARBARA	4,900	641	1
6	FOUNTAIN *(ARSON)*	August 1992	SHASTA	63,960	636	0
7	CITY OF BERKELEY *(POWERLINES)*	September 1923	ALAMEDA	130	584	0
8	BEL AIR *(UNDETERMINED)*	November 1961	LOS ANGELES	6,090	484	0
9	LAGUNA FIRE *(ARSON)*	October 1993	ORANGE	14,437	441	0
*10	PARADISE *(HUMAN)*	October 2003	SAN DIEGO	56,700	415	2
11	LAGUNA *(POWERLINES)*	September 1970	SAN DIEGO	175,425	382	5
12	PANORAMA *(ARSON)*	November 1980	SAN BERNARDINO	23,600	325	4
13	TOPANGA *(ARSON)*	November 1993	LOS ANGELES	18,000	323	3
14	49ER *(BURNING DEBRIS)*	September 1988	NEVADA	33,700	312	0
*15	SIMI *(UNDER INVESTIGATION)*	October 2003	VENTURA	108,204	300	0
16	SYCAMORE *(MISC. - KITE)*	July 1977	SANTA BARBARA	805	234	0
17	CANYON *(VEHICLE)*	September 1999	SHASTA	2,580	230	0
18	KANNAN *(ARSON)*	October 1978	LOS ANGELES	25,385	224	0
19	KINNELOA *(CAMPFIRE)*	October 1993	LOS ANGELES	5,485	196	1
*19	GRAND PRIX *(HUMAN)*	October 2003	SAN BERNARDINO	69,894	136	0
20	OLD GULCH *(EQUIP. USE)*	August 1992	CALAVERAS	17,386	170	0

Note that this list does not include fire jurisdiction. These are the Top 20 within California, regardless of whether they were state, federal, or local responsibility. Also note that "structures" is meant to include all loss - homes and outbuildings, etc.

4/22/2004

Los Angeles County accounts for 20%

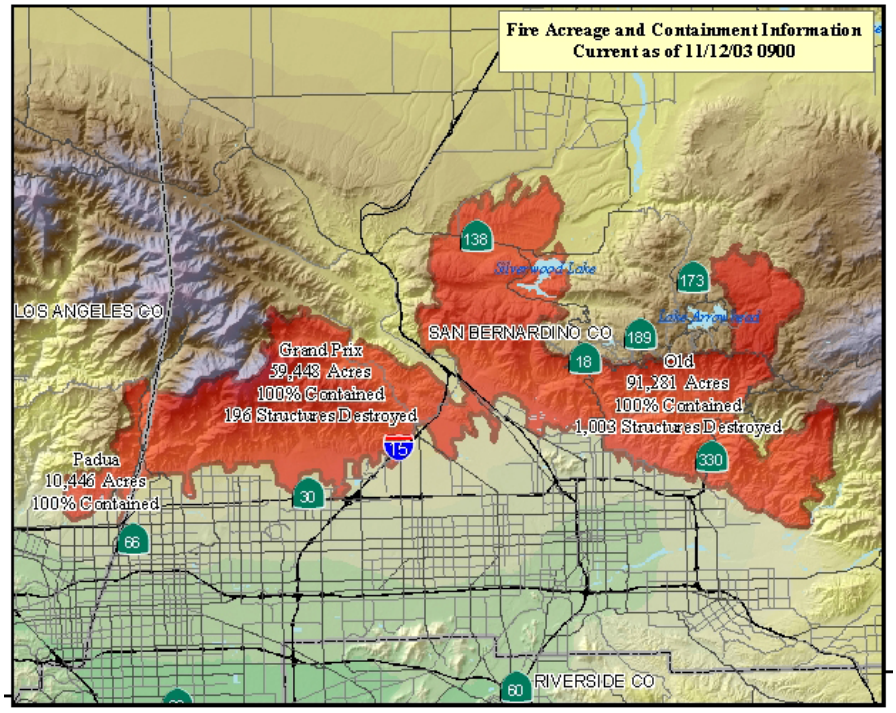
20 Largest California Wildland Fires by Acres Burned

	FIRE NAME/CAUSE	DATE	COUNTY	*ACRES*	STRUCTURES	DEATHS
*1	CEDAR *(HUMAN)*	October 2003	SAN DIEGO	273,246	2,820	15
2	MATILIJA *(UNDETERMINED)*	September 1932	VENTURA	220,000	0	0
3	MARBLE CONE *(LIGHTNING)*	July 1977	MONTEREY	177,866	0	0
4	LAGUNA *(POWERLINES)*	September 1970	SAN DIEGO	175,425	382	5
5	MCNALLY *(HUMAN)*	July 2002	TULARE	150,696	17	0
6	STANISLAUS COMPLEX *(LIGHTNING)*	August 1987	TUOLUMNE	145,980	28	1
7	BIG BAR COMPLEX *(LIGHTNING)*	August 1999	TRINITY	140,948	0	0
8	CAMPBELL COMPLEX *(POWERLINES)*	August 1990	TEHAMA	125,892	27	0
9	WHEELER *(ARSON)*	July 1985	VENTURA	118,000	26	0
*10	SIMI *(UNDER INVESTIGATION)*	August 1996	VENTURA	108,204	300	0
11	HWY. 58 *(VEHICLE)*	August 1996	SAN LUIS OBISPO	106,668	13	0
12	CLAMPITT *(POWERLINES)*	September 1970	LOS ANGELES	105,212	86	4
13	WELLMAN *(EQUIP. USE)*	June 1966	SANTA BARBARA	93,600	0	0
*14	OLD *(HUMAN)*	October 2003	SAN BERNARDINO	91,281	1,003	6
15	KIRK *(LIGHTNING)*	September 1999	MONTEREY	86,700	0	0
16	REFUGIO *(MISC. - STRUCTURE)*	September 1955	SANTA BARBARA	84,770	20	0
17	FORK *(UNDETERMINED)*	August 1996	LAKE	82,980	40	0
18	SCARFACE *(LIGHTNING)*	August 1977	MODOC	79,904	0	0
19	LAS PILITAS *(EQUIP. USE)*	July 1985	SAN LUIS OBISPO	74,640	41	0
20	MANTER *(UNDER INVESTIGATION)*	July 2000	TULARE	74,439	15	0

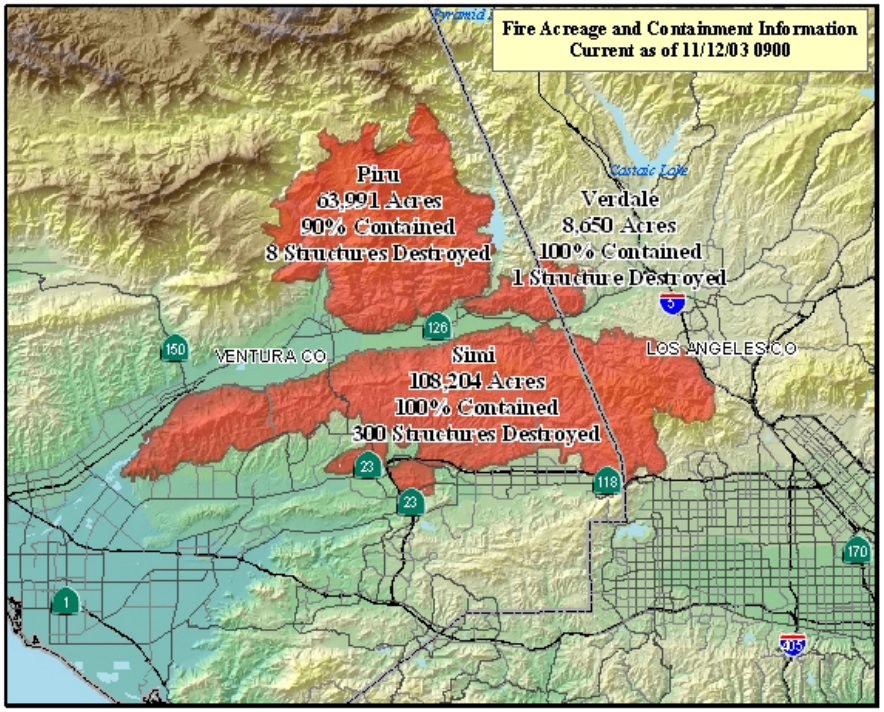
There is no doubt that there were fires with significant acreage loss in years prior to 1932, but those records are less reliable, and this list is meant to give an overview of the large acreage-loss fires in more recent times. (Also note that this list does not include fire jurisdiction. These are the top 20 within the state, regardless of whether they were state, federal, or local responsibility.)

Wild Fires of 2003

Grand Prix Fire within Los Angeles County (11/2003)

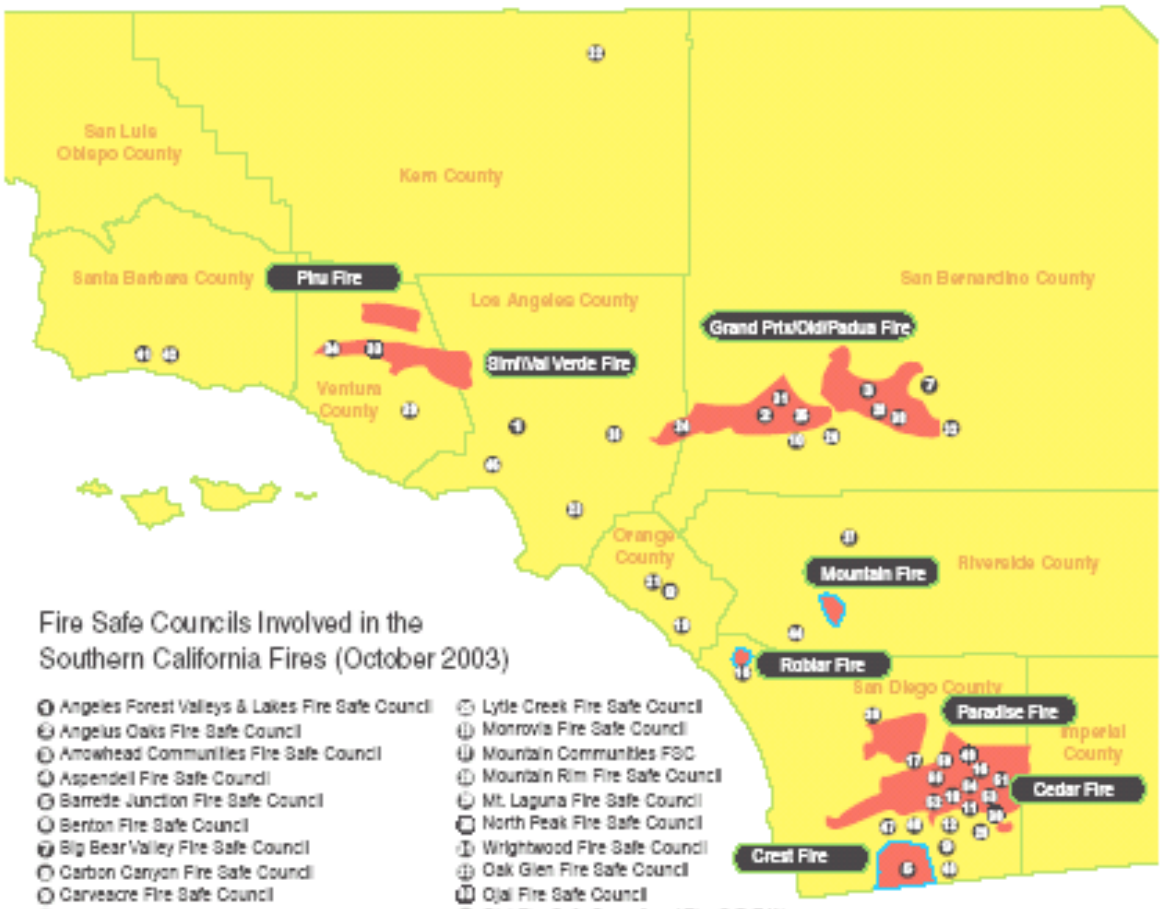


Simi & Verdale Fires within Los Angeles County (11/2003)



Southern California Region
Fire Safe Councils

Southern California Fires as of October 31, 2003 (approximate)



Fire Safe Councils Involved in the Southern California Fires (October 2003)

1. Angeles Forest Valleys & Lakes Fire Safe Council
2. Angelus Oaks Fire Safe Council
3. Arrowhead Communities Fire Safe Council
4. Aspendell Fire Safe Council
5. Barrette Junction Fire Safe Council
6. Benton Fire Safe Council
7. Big Bear Valley Fire Safe Council
8. Carbon Canyon Fire Safe Council
9. Carveacre Fire Safe Council
10. Crest Forest Chapter
11. Cuyamaca Fire Safe Council
12. Descanso Fire Safe Council
13. Eastern Sierra Fire Safe Council
14. Eastern Sierra Regional Fire Safe Council
15. Fall Brook FSC
16. Fire Safe Council of Greater Julian
17. Fire Safe Council of San Diego County
18. Harrison Park Fire Safe Council
19. Greater Laguna Coast Fire Safe Council
20. Green Valley Chapter
21. Inter Canyon Fire Safe Council
22. Kern River Valley Fire Safe Council
23. LA County Fire Safe Council
24. Lake Arrowhead Chapter
25. Lytle Creek Fire Safe Council
26. Monrovia Fire Safe Council
27. Mountain Communities FSC
28. Mountain Rim Fire Safe Council
29. Mt. Laguna Fire Safe Council
30. North Peak Fire Safe Council
31. Wrightwood Fire Safe Council
32. Oak Glen Fire Safe Council
33. Ojai Fire Safe Council
34. Ojai Fire Safe Council and The C.R.E.W.
35. Palomar Mountain Fire Safe Council
36. Pine Glade Fire Safe Council
37. Wheeler Crest Fire Safe Council
38. Running Springs/Arrowbear Chapter
39. Ventura County Fire Safe Council
40. San Luis Obispo County FireSafe Council
41. Santa Barbara County Fire Safe Council
42. Santa Barbara South Coast Fire Safe Council
43. South Fork Bishop Creek Fire Safe Council
44. Southwest Riverside County Fire Safe Council
45. Topanga Citizen's Firesafe Committee
46. Campo Fire Safe Council
47. Alpine Fire Safe Council
48. Shenilton Valley
49. Whispering Pines FSC
50. Wynola Fire Safe Councils
51. Kentwood II Fire Safe Council
52. Pine Hill Fire Safe Council
53. KQ Ranch Fire Safe Council
54. Kentwood Fire Safe Council
55. Julian Estates FSC

City of Burbank Fire Hazard Analysis

Serious fires in the City of Burbank occur infrequently. However, there is always the potential for a fire which could threaten human life, property and the well being of the community and its citizens. The City of Burbank is susceptible to both wildland and urban structural fires; the Burbank Fire Department (BFD) firefighters are trained in both structural and wildland firefighting techniques.

Wildland Fires

Wildland fires refer to those fires which occur in undeveloped areas and have the potential to destroy vegetation, wildlife habitats, the watershed and structures. These fires usually originate outside of structures in the urban/wildland interface area, and are usually caused by human carelessness with matches, cigarettes or campfires. Wildland brushfires are extremely dangerous to firefighters because this type of blaze moves quickly--sometimes traveling as fast as 30 miles per hour or greater--and, depending on local weather conditions, can be very unpredictable.

Burbank's wildland includes the area above Sunset Canyon Drive, generally following the contour of the foot of the Verdugo Mountains. This area is designated as the Mountain Fire Zone (MFZ), and is characterized by mountainous hillsides, heavy vegetation and narrow streets. These conditions, combined with the local climate, exacerbate the potential for wildland fires to ignite and spread. The MFZ is comprised of 2,956 acres of both private and public land: 2,257 acres are undeveloped "mountain reserve" land belonging to the City of Burbank, 228 acres are developed public park land, and 471 acres are developed residential areas with an estimated population of 30-35,000.

Wildland fires usually begin in areas which are steep in slope and where there is limited or no access for firefighting apparatus. The potential of these wildland fires to sweep into the hillside and into residential foothill developments is always a major threat. Access determines the relative difficulty of delivering both apparatus and personnel to a fire. With containment as the key, those areas with limited accessibility have a correspondingly greater risk from wildland fire than do more accessible areas. Efforts to protect lives and property from wildland fires focus primarily on brush clearance around homes.

The probability of a wildland fire occurring in the MFZ is high. Spring rains increase the amount of vegetation which becomes dry and flammable during the hot, dry summer months. These fires can be separated into two distinct categories: those which threaten homes and those which do not. Both types of fires are of concern; however, a blaze which threatens homes and human life is of special concern.

Urban/wildland interface fires pose a great threat to the environment, property and human life. Under the right conditions, a fire can occur at any given time, usually giving residents very little notice to evacuate. Available fuel, moisture content and prevailing winds are three of the major factors which determine where and when brush fires will occur and the intensity of the blaze.

Fire Hazard Response

Efforts at improving fire safety have traditionally been divided into two areas--fire prevention and fire suppression. The Insurance Services Office (ISO) rates city fire and water systems using both response and prevention as criteria. The BFD is rated as a Class 2 which can be equated to "very good". In order to maintain this high rating, Burbank's response and fire prevention procedures are periodically updated. The Burbank City Council adopted the most current version of the California State Uniform Fire Code as the official fire code for the City.

The City of Burbank has six fire stations distributed throughout the City. In addition, Burbank has a Fire Training Center used both for training purposes and as an Emergency Operations Center in times of emergency.

The BFD is the authority having jurisdiction over all fires and life threatening incidents in the City; this means it has ultimate responsibility and liability for the suppression of all fires in the City of Burbank. Even where private companies have their own trained firefighting personnel and equipment who respond first to a fire emergency, the BFD takes over control of the scene. The only exception to this is on interstate and state highways, where the California Highway Patrol has ultimate responsibility. The BFD is involved in a tri-city inter-jurisdictional agreement with the fire departments of the Cities of Glendale and Pasadena. The three cities involved assist each other without having to later pay for the assistance received. The agreement allows for the removal of city boundaries when fire safety or threat to life is concerned. Should any one city have a serious fire threat or use up all of its resources, the other two cities will provide the necessary fire fighters and equipment to help manage the incident. Verdugo Dispatch is a joint dispatch center, located in Glendale, which handles all fire department responses in the Cities of Burbank, Glendale and Pasadena.

In addition to the tri-city agreement, Burbank has a reciprocal arrangement with the City of Los Angeles in which the BFD is the initial responder for fire and medical aid at the Equestrian Center and other specific locations adjacent Burbank in exchange for aerial assistance and additional fire suppression resources. This aerial assistance is in the form of a helicopter which is capable of carrying a 350-gallon water load. Helicopter water-drops have proven to be an effective method of both containing and extinguishing brush fires, especially in mountainous areas.

Since it is recognized that no community has resources sufficient to cope with any and all emergencies which could occur, there is in place a statewide system of mutual aid. Mutual aid requests are processed through the State Office of Emergency Services (OES). Under this system each jurisdiction relies first upon its own and/or neighboring jurisdiction's resources to deal with a disaster before calling for outside assistance.

A local disaster or large scale emergency may require the coordination of volunteers to assist in various roles. There are approximately 225 Community Disaster Volunteers (CDVs's) registered with the City's personnel office; each of these volunteers have pledged to assist in times of disaster. These volunteers are prepared to assist City personnel in damage location, medical care, provision of emergency shelter and emergency amateur radio services to augment communications with other rescue organizations such as the Red Cross. A valuable component of Burbank's volunteer network which assists the community during times of disaster is the Burbank Emergency Amateur Radio Service (BEARS). Their primary function is to augment communication throughout the City, especially during times of emergency.

The wildland areas which are most vulnerable to brush fires are also the areas most limited in terms of available water supply and pumping capacity. In addition to providing heavy construction equipment to aid in fire suppression, the City's Public Works Department has a vehicle which is capable of carrying 1,500 gallons of water to the site of a fire. Starlight Mesa, located adjacent to the Starlight Bowl in the center of the undeveloped wildland area, provides an unlimited water supply by means of hydrants located adjacent each of three concrete helipads for helicopters aiding in wildland fire suppression efforts.

In the event of a brushfire in the hillside area of Burbank, the **following streets are to be used exclusively for emergency vehicle access.** Any east-west street can be used for evacuation with the exception of:

- Elmwood Avenue from Glenoaks to Sunset Canyon
- Providencia Avenue from Glenoaks to Sunset Canyon
- Tujunga Avenue from Glenoaks to Sunset Canyon
- Harvard Road from Glenoaks to Sunset Canyon
- Walnut Avenue from Glenoaks to Sunset Canyon
- Cambridge Drive from Glenoaks to Bel Aire
- Lamer Street from Glenoaks to Keystone
- Irving Drive from Sixth to Kenneth

Fire Hazard Mitigation

Efforts to protect lives and property from wildland fires focus primarily on brush clearance around homes. The BFD requires hillside residents in the MFZ to remove native vegetation and mow all hazardous vegetation (grass and weeds) within a minimum of 200 feet of any building or structure. The first 30 feet from the building must be cleared to ground level and the vegetation in the remaining 70 feet must be no more than 18 inches above the ground. The 18-inch height requirement is necessary to stabilize the soil to prevent erosion and mud-slides. Fire Station 16, at the base of the Verdugo Mountains, is responsible for management of the brush clearance program in the MFZ. In late spring, the BFD mails out an informational letter to affected property owners within the designated MFZ notifying them of the City's brush clearance policy and code requirements for private property. Property owners are given a reasonable amount of time to remove hazardous vegetation in compliance with Fire Code requirements before notices of violation are sent out. Most residents voluntarily comply with the City's requirements upon receiving the first letter. However, the City has, in the past, hired a contractor to remove hazardous vegetation on properties in which the owner has failed to comply. In such instances, the cost of correcting the hazard is added to the property owner's tax bill.

The City of Burbank contracts with Los Angeles County to remove brush on public land adjacent to structures in the hillside area. In 1994-95, Burbank spent approximately $60,000 for brush removal in the MFZ. Beginning in early July, Los Angles County crews begin removal of hazardous vegetation from public land. The crews first cut priority areas identified by the BFD and through citizen complaints.

The fire danger of wood shake and wood shingle roofs and exterior wall coverings has been well-documented. Flying brands which are carried aloft by thermal updrafts are of serious concern due to the threat of spot fires, especially in residential areas. "Spot fire" describes a fire which started by firebrands (burning material, leaves, wood, glowing charcoal or sparks) carried ahead of the main fire by wind. Spot fires pose a problem to firefighters because local resources become quickly overburdened. The Burbank City Council, in 1992, passed an ordinance which prohibits wood roof coverings and exterior wood shake wall coverings on any new or existing building or structure. This ordinance allows a 20-year amortization period for the eventual elimination of wood shingle roofs and exterior wall coverings in the City of Burbank.

The BFD has a multifaceted public education program, aimed at students, businesses, senior citizens, scouts and other clubs, and the City's residents at large. These programs are an important part of the BFD's efforts to prevent fire and other disasters in the community. The public education activities of the fire department include, but are not limited to, public school demonstrations, safety talks, Disaster Preparedness Fair, Fire Prevention Week, Fire Services Day and utility bill informational inserts.

Fire Safety Policies

The overriding City goal with regard to fire safety is TO REDUCE THREATS TO PUBLIC SAFETY AND PROTECT PROPERTY FROM WILDLAND AND STRUCTURAL FIRE HAZARDS. The following policies support the achievement of this goal.

P1. Maintain and strengthen the review of projects and development proposals through vigilant enforcement of the adopted Fire and Building Codes, as well as the implementation of mitigation measures in areas of high wildland and structural fire hazard.

P2. Continue to coordinate firefighting efforts with state and federal agencies as well as with neighboring local agencies.

P3. Reduce fire hazards associated with older buildings, multi-story structures and fire hazardous industrial facilities.

P4. Maintain an adequate fire suppression capability in areas of intensifying urban development.

P5. Maintain and enhance fire prevention programs.

Wildfire Smoke

Characteristics of Wildfire Smoke

The behavior of smoke depends on many factors, including the fire's size and location, the topography of the area and the weather. Inversions are common in mountainous terrain. Smoke often fills the valleys, where people usually live. Smoke levels are unpredictable: a wind that usually clears out a valley may simply blow more smoke in, or may fan the fires, causing a worse episode the next day. Smoke concentrations change constantly. By the time public health officials can issue a warning or smoke advisory, the smoke may already have cleared. National Weather Service satellite photos, weather and wind forecasts, and knowledge of the area can all help in predicting how much smoke will come into an area, but predictions are rarely accurate for more than a few hours.

Estimating Particulate Matter Levels

Particulate matter levels are measured as micrograms (*m*g) of particles per cubic meter of air. Most particle monitoring devices measure particulate matter with a median diameter of 10 micrometers or less (PM_{10}). An increasing number of monitors now measure smaller particles, also known as fine particles, which have median diameters of 2.5 micrometers or less ($PM_{2.5}$). In wildfire smoke, most particles are less than one micrometer, so the values obtained by measuring either PM_{10} or $PM_{2.5}$ are virtually interchangeable, and are treated as such in this document.

Communities with established air quality programs may issue public alerts based on predicted 24-hour average concentrations of particulate matter. Smoke emergencies need to be handled differently, however, as smoke concentrations generally tend to be very high for only a few hours at a time. These short-term peaks may cause some of the most deleterious health effects.

Another factor is public perception. Since smoke is so effective at scattering light, visibility changes drastically as smoke concentrations increase. Even without being told, the public can tell when the smoke is getting worse, and they want authorities to respond to changes as they are happening. Many communities don't have continuous PM monitoring, and therefore need to estimate particle levels. Continuous PM monitors give an instant reading of particulate matter concentrations. However, visibility can sometimes serve as a good surrogate. Even in areas with monitors, this index can be useful, since smoke levels change constantly and can vary dramatically even between monitors that are near one another. A visibility index gives members of the public a quick way to assess smoke levels for themselves.

Categories	Visibility in Miles	Particulate matter levels* (1-hour average, $\mu g/m^3$)
Good	10 miles and up	0 - 40
Moderate	6 to 9	41 - 80
Unhealthy for Sensitive Groups	3 to 5	81 - 175
Unhealthy	1 1/2 to 2 1/2	176 - 300
Very Unhealthy	1 to 1 1/4	301 - 500
Hazardous	3/4 mile or less	over 500

*In wildfire smoke, most particles are less than one micrometer, so the values obtained by measuring either PM_{10} or $PM_{2.5}$ are virtually interchangeable, and are treated as such in this document. Therefore, in the table above, the different particle levels can be measured using either PM_{10} or $PM_{2.5}$ monitors.

Estimating particulate matter concentrations from visibility assessment

Smoke Hazards as a Result of Wildland Fires

Smoke is composed primarily of carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons and other organic chemicals, nitrogen oxides, trace minerals and several thousand other compounds. The actual composition of smoke depends on the fuel type, the temperature of the fire, and the wind conditions. Different types of wood and vegetation are composed of varying amounts of cellulose, lignin, tannins and other polyphenolics, oils, fats, resins, waxes and starches, which produce different compounds when burned.

Particulate matter is the principal pollutant of concern from wildfire smoke for the relatively short-term exposures (hours to weeks) typically experienced by the public. Particulate matter is a generic term for particles suspended in the air, typically as a mixture of both solid particles and liquid droplets. Particles from smoke tend to be very small - less than one micrometer in diameter. For purposes of comparison, a human hair is about 60 micrometers in diameter. Particulate matter in wood smoke has a size range near the wavelength of visible light (0.4 – 0.7 micrometers). Thus, smoke particles efficiently scatter light and reduce visibility. Moreover, such small particles can be inhaled into the deepest recesses of the lung and are thought to represent a greater health concern than larger particles.

Another pollutant of concern during smoke events is carbon monoxide. Carbon monoxide is a colorless, odorless gas, produced by incomplete combustion of wood or other organic materials. Carbon monoxide levels are highest during the smoldering stages of a fire. Other air pollutants, such as acrolein, benzene, and formaldehyde, are present in smoke, but in much lower concentrations than particulate matter and carbon monoxide.

The effects of smoke range from eye and respiratory tract irritation to more serious disorders, including reduced lung function, bronchitis, exacerbation of asthma, and premature death. Studies have found that fine particles are linked (alone or with other pollutants) with increased mortality and aggravation of pre-existing respiratory and cardiovascular disease. In addition, particles are respiratory irritants, and exposures to high concentrations of particulate matter can cause persistent cough, phlegm, wheezing and difficulty breathing. Particles can also affect healthy people, causing respiratory symptoms, transient reductions in lung function, and pulmonary inflammation. Particulate matter can also affect the body's immune system and make it more difficult to remove inhaled foreign materials from the lung, such as pollen and bacteria. The principal public health threat from short-term exposures to smoke is considered to come from exposure to particulate matter.

Wildfire smoke also contains significant quantities of respiratory irritants. Formaldehyde and acrolein are two of the principal irritant chemicals that add to the cumulative irritant properties of smoke, even though the concentrations of these chemicals individually may be below levels of public health concern.

Sensitive Populations

Most healthy adults and children will recover quickly from smoke exposures and will not suffer long-term consequences. However, certain sensitive populations may experience more severe short-term and chronic symptoms from smoke exposure. Much of the information about how particulate matter affects these groups has come from studies involving airborne particles in cities, though a few studies examining the effects of exposure to smoke suggest that the health effects of wildfire smoke are likely to be similar. More research is needed to determine whether particles from wildfires affect susceptible subpopulations differently.

Individuals with asthma and other respiratory diseases: Levels of pollutants that may not affect healthy people may cause breathing difficulties for people with asthma or other chronic lung diseases. Asthma, derived from the Greek word for panting, is a condition characterized by chronic inflammation of the airways, with intermittent bronchial-constriction and airflow obstruction, causing shortness of breath, wheezing, chest tightness, coughing, sometimes accompanied by excess phlegm production. During an asthma attack, the

muscles tighten around the airways and the lining of the airways becomes inflamed and swollen, constricting the free flow of air. Because children's airways are narrower than those of adults, irritation that would create minor problems for an adult may result in significant obstruction in the airways of a young child. However, the highest mortality rates from asthma occur among older adults. Individuals with chronic obstructive pulmonary disease (COPD), which is generally considered to encompass emphysema and chronic bronchitis, may also experience a worsening of their conditions because of exposure to wildfire smoke. Patients with COPD often have an asthmatic component to their condition, which may result in their experiencing asthma-like symptoms. However, because their pulmonary reserve has typically been seriously compromised, additional bronchial-constriction in individuals with COPD may result in symptoms requiring medical attention. Epidemiological studies have indicated that individuals with COPD run an increased risk of requiring emergency medical care after exposure to particulate matter or forest fire smoke. Exposure to smoke may also depress the lung's ability to fight infection. People with COPD may develop lower respiratory infections after exposure to wildfire smoke, which may require urgent medical care as well. In addition, because COPD is usually the result of many years of smoking, individuals with this condition may also have heart disease, and are potentially at risk from both conditions.

Individuals with airway hyper-responsiveness: A significant fraction of the population may have airway hyper-responsiveness, an exaggerated tendency of the bronchi and bronchioles to constrict in response to respiratory irritants and other stimuli. While airway hyper-responsiveness is considered a hallmark of asthma, this tendency may also be found in many non-asthmatics, as well; for example, during and following a lower respiratory tract infection. In such individuals, smoke exposure may cause bronchial-spasm and asthma-like symptoms.

Individuals with cardiovascular disease: Diseases of the circulatory system include, among others, high blood pressure, cardiovascular diseases, such as coronary artery disease and congestive heart failure, and cerebro-vascular conditions, such as atherosclerosis of the arteries bringing blood to the brain. These chronic conditions can render individuals susceptible to attacks of angina pectoris, heart attacks, sudden death due to a cardiac arrhythmia, acute congestive heart failure, or stroke. Cardiovascular diseases represent the leading cause of death in the United States, responsible for about 30 to 40 percent of all deaths each year. The vast majority of these deaths are in people over the age of 65. Studies have linked urban particulate matter to increased risks of heart attacks, cardiac arrhythmias, and other adverse effects in those with cardiovascular disease. People with chronic lung or heart disease may experience one or more of the following symptoms: shortness of breath, chest tightness, pain in the chest, neck, shoulder or arm, palpitations, or unusual fatigue or lightheadedness. Chemical messengers released into the blood because of particle-related lung inflammation may increase the risk of blood clot formation, angina episodes, heart attacks and strokes.

The elderly. In several studies researchers have estimated that tens of thousands of elderly people die prematurely each year from exposure to particulate air pollution, probably because the elderly are more likely to have pre-existing lung and heart diseases, and therefore are more susceptible to particle-associated effects. The elderly may also be more affected than younger people because important respiratory defense mechanisms may decline with age. Particulate air pollution can compromise the function of alveolar macrophages, cells involved in immune defenses in the lungs, potentially increasing susceptibility to bacterial or viral respiratory infections.

Children. Children, even those without any pre-existing illness or chronic conditions, are considered a sensitive population because their lungs are still developing, making them more susceptible to air pollution than healthy adults. Several factors lead to increased exposure in children compared with adults: they tend to spend more time outside; they engage in more vigorous activity, and they inhale more air (and therefore more particles) per pound of body weight. Studies have shown that particulate pollution is associated with increased respiratory symptoms and decreased lung function in children, including symptoms such as episodes of coughing and difficulty breathing. These can result in school absences and limitations of normal childhood activities.

Pregnant women. While there have not been studies of the effects of exposure to wildfire smoke on pregnancy outcomes, there is substantial evidence of adverse effects of repeated exposures to cigarette smoke, including both active and passive smoking. Wildfire smoke contains many of the same compounds as cigarette smoke. In

addition, recent data suggest that exposures to ambient air pollution in cities may result in low birth weight and possibly other, more serious adverse reproductive effects. Therefore, it would be prudent to consider pregnant women as a potentially susceptible population as well.

Smokers. People who smoke, especially those who have smoked for many years, have already compromised their lung function. However, due to adaptation of their lungs to ongoing irritation, smokers are less likely to report symptoms from exposure to irritant chemicals than are nonsmokers. However, they may still be injured by wildfire smoke. Therefore, some smokers may unwittingly put themselves at greater risk of potentially harmful wildfire smoke exposures, believing that they are not being affected.

Hazards Associated Cleanup of Wildland Fires

Heat sources may remain as a result of smoldering wood or other debris that could reignite if contact is made with a combustible material or if oxygen becomes available. Workers and employers must therefore take extra precautions.

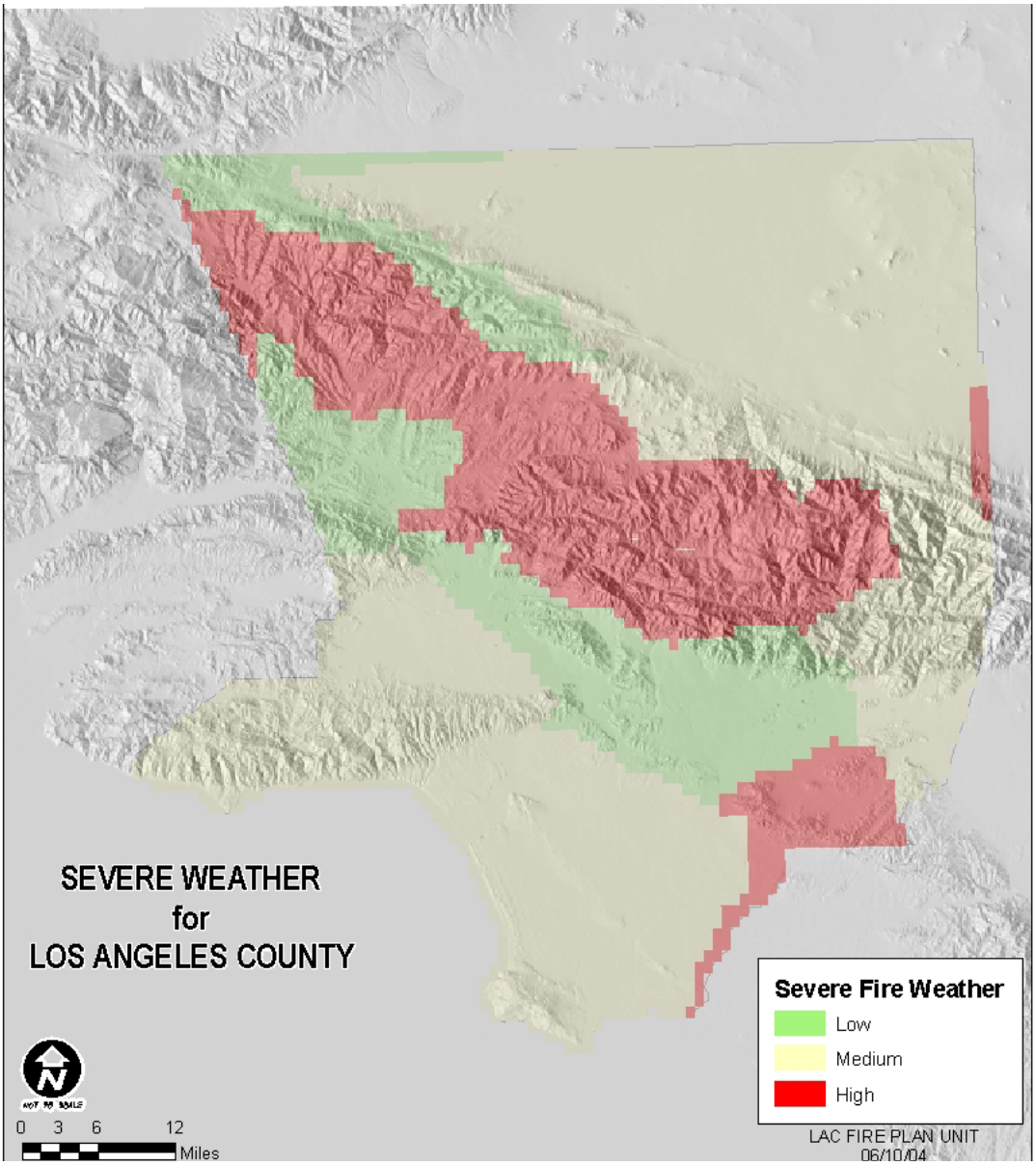
Cleanup activities may involve walking on unstable surfaces such as construction debris, trees and other vegetation. Piles of debris and other unstable work surfaces create a risk for traumatic injury from slips, falls, puncture wounds from nails and sharp objects, and collapsing materials. Extreme caution is necessary when working on these surfaces. Protective equipment, such as hard hats, safety glasses, leather gloves, and steel toe boots should be considered to minimize the risk of injury.

Cleanup workers are at risk for developing serious musculoskeletal injuries to the hands, back, knees, and shoulders. Special attention is needed to avoid back injuries associated with manual lifting and handling of debris and building materials.

Cleanup workers are at serious risk for developing heat stress. Excessive exposure to hot environments can cause a variety of heat-related problems, including heat stroke, heat exhaustion, heat cramps, and fainting

Fires can rearrange and damage natural walkways, as well as sidewalks, parking lots, roads, and buildings. Never assume that fire-damaged structures or ground are stable. Buildings that have been burned may have suffered structural damage and could be dangerous.

Fires to commercial and residential buildings and water used to fight the fire can dislodge tanks, drums, pipes, and equipment, which may contain hazardous materials such as pesticides or propane. Containers may be damaged by fire and heat.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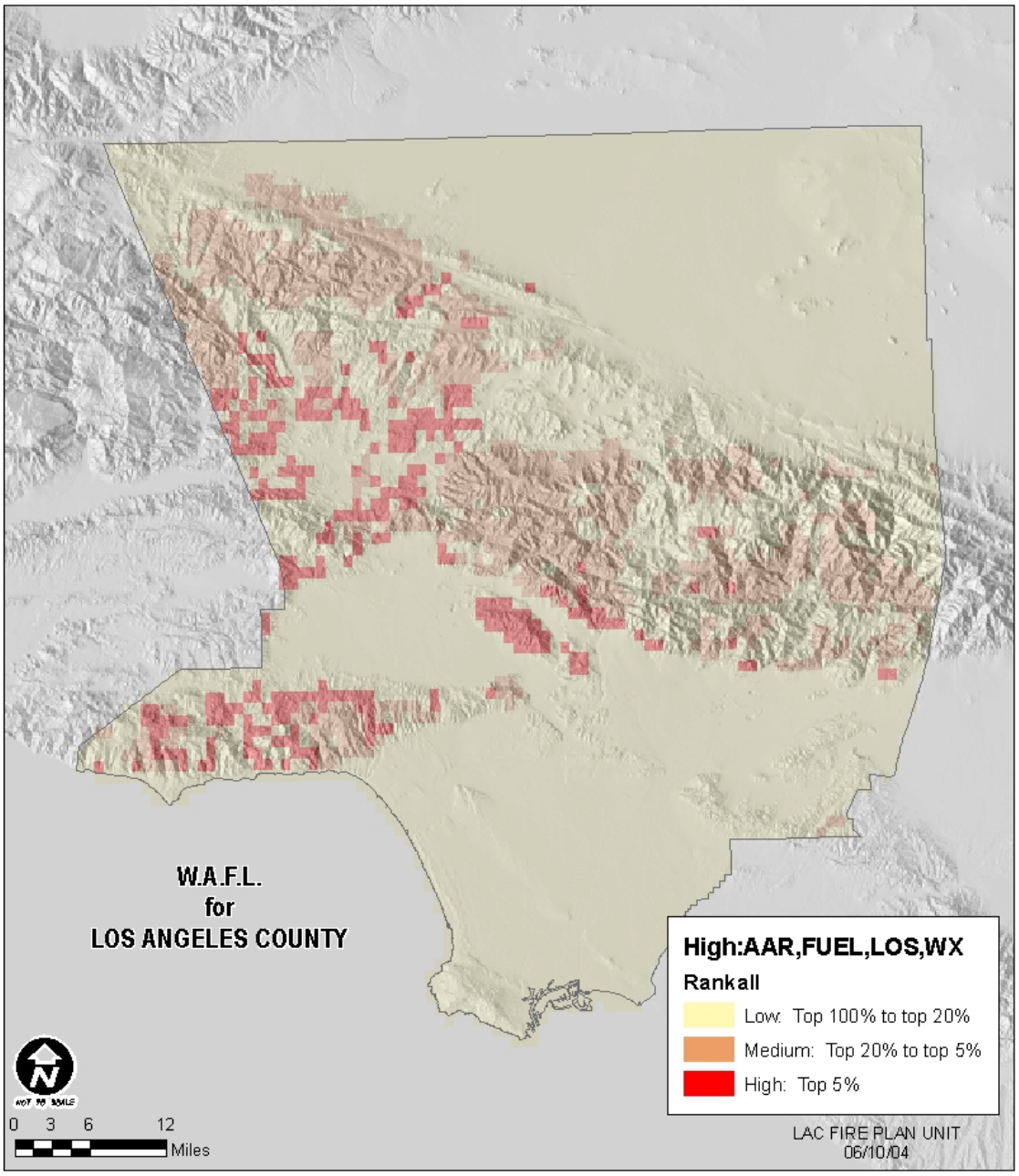
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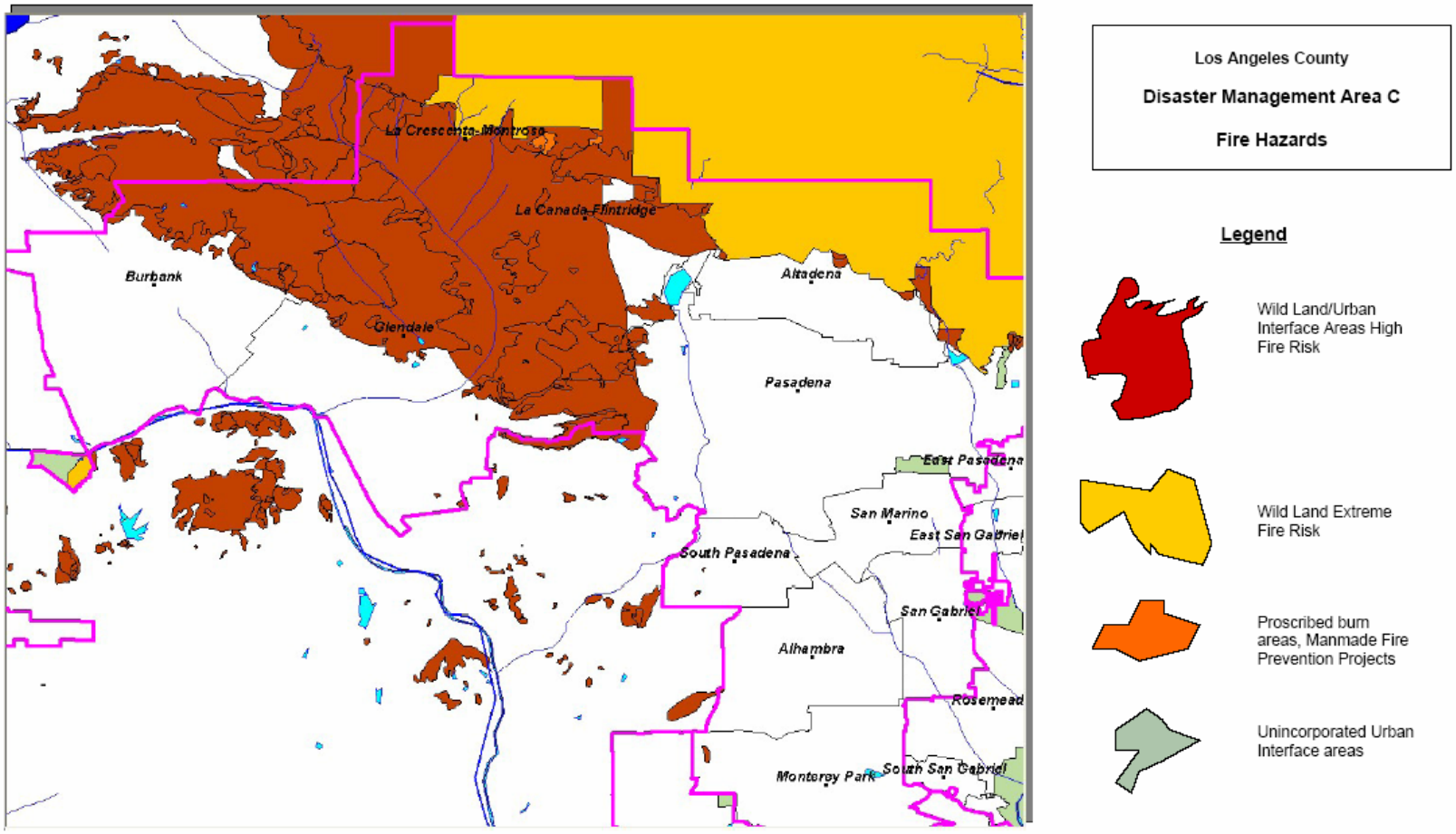
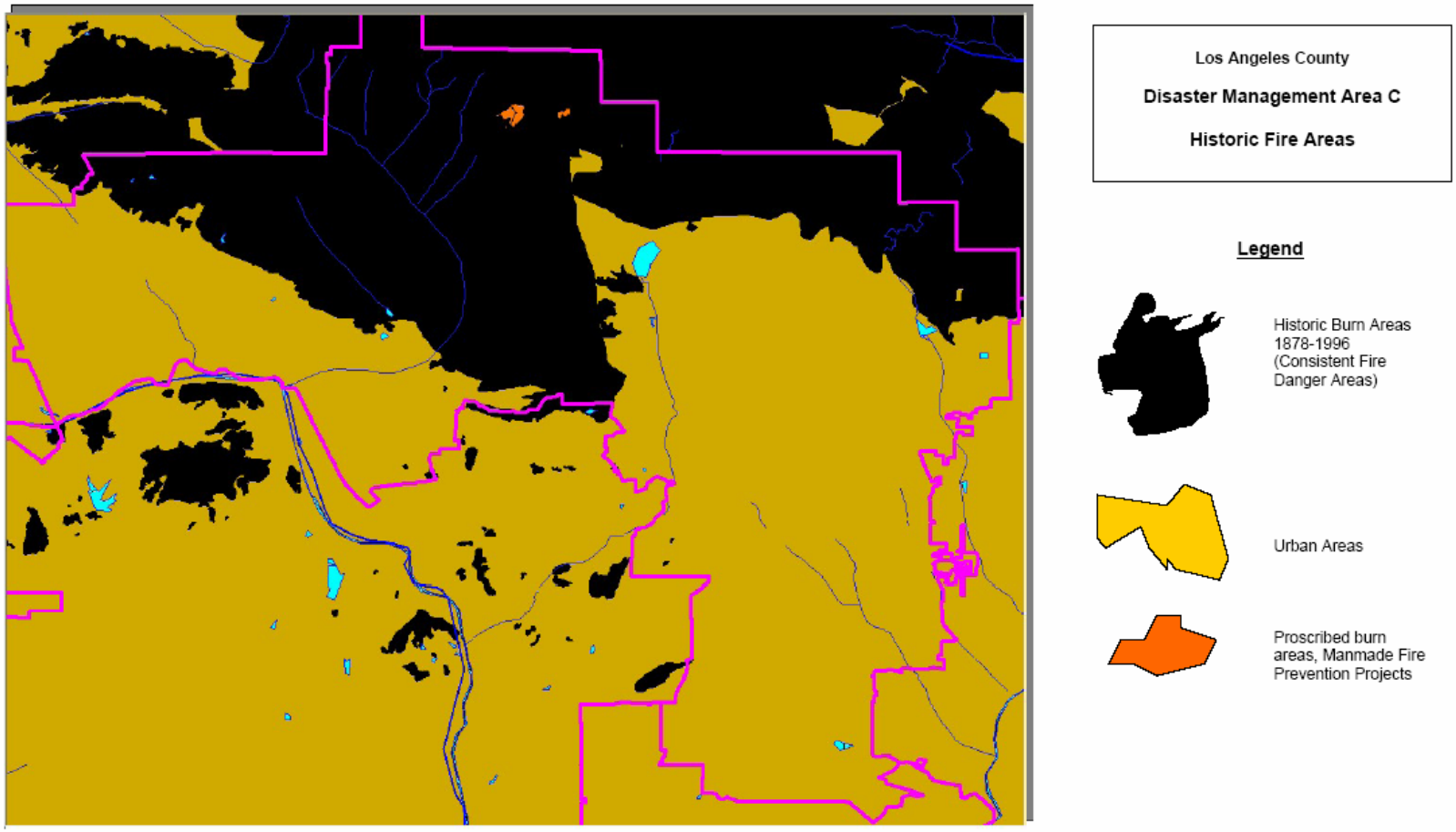

Los Angeles County
Disaster Management Area C
Fire Hazards
Legend
Wild Land/Urban Interface Areas High Fire Risk
Wild Land Extreme Fire Risk
Proscribed burn areas, Manmade Fire Prevention Projects
Unincorporated Urban Interface areas
La Crescenta-Montrose
La Canada-Flintridge
Burbank
Glendale
Altadena
Pasadena
East Pasadena
San Marino
East San Gabriel
South Pasadena
San Gabriel
Alhambra
Rosemead
Montercy Park
South San Gabriel


Los Angeles County
Disaster Management Area C
Historic Fire Areas
Legend
Historic Burn Areas 1878-1996 (Consistent Fire Danger Areas)
Urban Areas
Proscribed burn areas, Manmade Fire Prevention Projects

Terrorism & Weapons of Mass Destruction (WMD)

Terrorism & Weapons of Mass Destruction were rated as HIGH PRIORITY HAZARDS by the City of Burbank.

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.

Threat Analysis

The catastrophic attacks on the World Trade Center, Pentagon, and Murrah Federal Building in Oklahoma City shocked the nation into a reality that there are no domestic safe havens from acts of terrorism. These events have punctuated our nation's vulnerability, and highlighted California's risk of similar attack against its public officials, private and multi-national corporations, public infrastructure, and government faculties.

Historically, California has had a long experience combating terrorist groups, both domestic and international. Domestic terrorist groups in the state have been largely issue-oriented, while the few known internationally based incident have mostly targeted the state's émigré communities and been related to foreign disputes. Today, however, both groups are more likely to be aligned nationally and/or internationally through electronic networking. The issues and politics of these groups remain essentially unchanged but now include increasing expressions of hatred for existing forms of government.

The World Trade Center and Pentagon incidents demonstrate that international terrorist groups have the potential to operate with deadly effectiveness in this country. Such groups may offer no allegiance to any particular country but seek political or personal objectives that transcend national/state boundaries.

There is appropriate concern that such attacks as witnessed in Tokyo, New York City, Oklahoma City and in our Capital could occur in California. A terrorist acting alone or in concert with any of the known national or international groups could readily commit acts of terrorism in California. The open availability of basic shelf type chemicals and mail order biological research materials, coupled with an access to even the crudest laboratory facilities, could enable the individual extremist or an organized terrorist faction to manufacture proven highly lethal substances or to fashion less sophisticated weapons of mass destruction. The use of such weapons could result in mass casualties, long-term contamination and wreak havoc to both the state and national economies. The freedom of movement and virtually unrestricted access to government officials, building, and critical infrastructure afforded to

California's citizens and foreign visitors, presents the terrorist with the opportunity and conditions of anonymity to deliver such devastation and its tragic consequences with only the crudest devises of nuclear, chemical, or biological content.

Situation

The complexity, scope, and potential consequences of a terrorist threat or incident require that there be a rapid and decisive capability to resolve the situation. The resolution to an act of terrorism demands an extraordinary level of coordination of crisis and consequence management function and technical expertise across all level of government. No single Federal, State, or local government agency has the capability or requisite authority to respond independently and mitigate the consequences of such a threat to national security. The incident may affect a single location or multiple locations, each of which may be a disaster scene, hazardous scene and/or a crime scene simultaneously.

As in all incidents, WMD incidents may involve mass casualties and damaged buildings or other types of property. However, there are several factors surrounding WMD incidents that are unlike any other type of incidents that must be taken into consideration when planning a response. First responders' ability to identify aspects of the incident (e.g., signs and symptoms exhibited by victims) and report them accurately will be key to maximizing the use of critical local resources and for triggering a State/Federal response.

The situation may not be recognizable until there are multiple casualties. Most chemical and biological agents are not detected by methods used for explosives and firearms. Most agents can be carried in containers that look like ordinary items.

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

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

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

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

There will be a stronger reaction from the public than with other types of incidents. The thought of exposure to a chemical or biological agent or radiation evokes terror in most people. The fear of the unknown also makes the public's response more sever.

Time is working against responding elements. The incident can expand geometrically and very quickly. In addition, the effects of some chemicals and biological agents worsen over time. Support facilities, such as utility stations and 9-1-1 centers, along with critical infrastructures, are at risk as targets. Specialized local and State response capabilities may be overwhelmed.

The City of Burbank has sites within its boundaries that could be potential terrorist targets. Burbank is the home of multiple entertainment companies, an airport, major transportation routes and a variety of other potential sites for terrorist activity. The City is also close enough to Los Angeles to suffer ancillary effects of a terrorist attack.

Terrorist incidents create a unique environment in which to manage emergency response. Local responders are typically the first on scene during an actual incident and local government has primary responsibility for protecting public health and safety.

Departmental Agency Responsibilities

The **Burbank Police Department** will be the lead agency for crisis management, perimeter security, access control, traffic/crowd control, evacuations, notifications, and safeguarding evidence. Crisis management activities may include:

- Investigation, tracking, and maintaining scene integrity.
- Coordinating coroner issues with the Los Angeles County Coroner's Department.
- Use of Special Weapons and Tactics (SWAT) or Rapid Deployment Force (RDF) units assisting with damage assessment and fatalities management.

According to SEMS, the police department will request law enforcement mutual aid if needed to accomplish these functions.

The **Burbank Fire Department** will be the lead for fire response, hazardous materials events, and medical/rescue operations. The Fire Department will provide support as necessary to the police department for Crisis Management activities. Existing procedures, such as the Fire Department's Hazardous Materials Response procedures and NBC (Nuclear, Biological & Chemical) Response Protocols will be used as necessary. The Department will assist with:

- Fire and rescue operations
- Emergency medical services coordination
- Perimeter and access control
- Evacuation operations
- Notifications
- Safeguarding evidence
- Damage assessment and
- Fatalities management
- Potential areas of concern may include:
- Addressing environmental needs
- Obtaining personnel with radiological training
- Insuring decontamination procedures (radiological and chemical) in place and
- Insuring biological agents containment

According to SEMS, the Fire Department will request fire and rescue mutual aid if needed to accomplish these functions.

The **Public Works Department and Burbank Water & Power** will work together to serve as lead for damage assessment and utilities concerns. Potential activities include:

- Reconnaissance of public infrastructure (road, bridges, facilities, and utilities) Alternate route identification
- Building access

- Utility access re-routing
- Temporary repairs
- Building access and crowd control issues.

According to SEMS, both departments will request mutual aid if needed.

The **Park, Recreation and Community Service Department** will assist with fatalities management and care and shelter issues. Potential care and shelter issues are:

- Refresher training on security or mental health concerns
- Care and shelter facility operations
- Care and shelter representation within the EOC and other locations
- Logistical requirements for care and shelter
- Coordination with American Red Cross

Impact On The Community

While many specialized resources will be mobilized to respond to a WMD incident, it will take time for that assistance to arrive. Many specialized resources (such as military response teams) may need to be airlifted to the area requiring local resources to manage the initial phases of a WMD emergency. This initial response phase may range from a few to many hours (response times for Federal resources ranging from 2-24 hours can be expected). Local first responders (law enforcement, fire, hazmat, EMS, etc.) will be augmented by the Metropolitan Medical Response System (MMRS) to manage this crucial initial phase. Key initial activities include situation assessment, responder safety, containment, protective actions (evacuation in-place protection), decontamination, treatment and transport of injured persons.

Community panic, intense media interest, and the convergence of contaminated persons at local hospitals and urgent care centers can be expected. Rapid assessment of the scope of the incident, activation of the SEMS emergency management infrastructure, designation of casualty collection points or field treatment sites, and decontamination points are essential to mitigating potential community panic. Efforts to assess the situation and provide clear, easy to follow emergency management instructions of the public are essential. The following describe some of the concerns expected during the initial stages of a WMD incident.

Down Wind Evacuation

A large release may result in a lethal plume that may travel for miles. Emergency agencies in neighboring jurisdictions must be advised of the release and included in incident management activities.

Traffic Restrictions and Congestion

Roads, freeways and transit systems may need to be closed to contain the incident. Regardless of the need, panic may cause some persons to self evacuate, Traffic congestion and gridlock conditions and confusion may result. These factors will slow response by emergency agencies and specialized resources to affected areas. Detailed traffic management plans will need to be developed.

Self Transport to Medical Providers

Injured and contaminated victims may leave the immediate site of the incident and then go to hospitals, urgent care centers or individual physicians seeking medical care. In most cases, the care provider will not be equipped to decontaminate victims or treat WMD casualties. This can extend the scope of the

incident, potentially lead to secondary contamination and strain local medical and emergency response resources Hospitals impacted by an influx of casualties who have not been decontaminated will have to establish decontamination area and may not be able to continue providing treatment.

Panic Victims

In the immediate aftermath of a WMD incident, responders should anticipate a number of people who think they have been exposed to or contaminated by the agent(s) even though there has been no actual exposure. Provisions must be made to manage these persons and provide supportive care as necessary.

Scarce Supplies

Equipment and supplies needed to manage a WMD event will be in short supply. Sufficient pharmacological supplies may not be available. Antidotes and other drugs used to treat WMD victims are usually not stockpiled in sufficient quantities for use in a mass casualty incident. Efforts to secure additional supplies will be an immediate need.

Personnel involved in managing potential WMD incidents must be aware of these concerns. Measures to address these issues must be incorporated into the Incident Action Plan and should be considered and assessed throughout the management of the WMD incident.

Community Awareness and Public Information Concerns

Effective management of the impact of a WMD incident on the community requires the coordinated dissemination of accurate and timely information. Such information must be disseminated in a manner that minimizes confusion and unwarranted panic. Conflicting information must be avoided and information regarding protective actions, appropriate evacuation measures, self-aid and decontamination information must be provided in a timely manner. Within the City, the dissemination of such information will be handled by the City's EOC in close coordination with all affected individual agencies and jurisdictions.

Recovery Concerns

A terrorist incident involving WMD or NBC agents may yield fatalities. The number of deaths is dependent upon the specific condition present at an incident. Factors influencing the number of fatalities include: the agent released, dispersal method, location of release, number of persons present during the attack, and the response and mitigation measures employed. The most complex situation would involve a mass casualty situation requiring the establishment of fatality or decedent collection points, as well as the activation of mutual aid protocols to effectively manage a mass fatality situation.

A mass fatality situation resulting from a NBC terrorist incident is compounded by the presence or risk of NBC contaminants. Deceased persons (and their personal effects) contaminated by NBC agents must be decontaminated before removal from the incident scene. Decedents and their personal effects will be managed by the Coroner's Department; however, contaminated bodies or items shall not be transferred to Coroner's personnel prior to decontamination. Additionally, no Coroner's personnel shall conduct operation within a contaminated area unless equipped with PPE.

The management of a mass fatality situation involving NBC agents may require specialized assistance. The region's National Medical Response Team-West is designed to provide technical assistance regarding deceased disposition in WMD situations. Additional technical assistance is available from the U.S. Public Health Services and military specialist. Military mass fatality management resources

(i.e., graves registration unit) may be appropriate in some cases; if required, they accessed through regular military support to civil authorities channels.

Coroner's personnel will coordinate their activities with the MMRS to ensure appropriate mass fatality management. All requests for specialized mass fatality assistance will be coordinated with the Law Enforcement Branch of the State OES to ensure there is no duplication of effort. The Coroner's Department is responsible for determining the number of fatalities and their disposition. The Coroner shall provide official death count during any disaster. It is crucial that all involved agencies immediately relay all fatality information to the coroner.

Bioterrorism

Bioterrorism is the deliberate release of pathogenic microorganisms (bacteria, viruses, fungi or toxins) into a community. The most likely diseases associated with bioterrorism include smallpox, anthrax, botulism, plague, and tularemia. Additionally viral hemorrhagic fever (VHF) viruses such as Lassa, Marburg, and Ebola rarely, if ever, identified in North America, may be deliberately introduced. Other potential agents include brucellosis, western and eastern equine viruses that cause encephalitis, Q fever, g landers, and toxin-producing *Staphylococcus aureus*.

With the exception of small pox, VHF, and the encephalitis viruses, all bioterrorism agents can be treated with antibiotics or toxin antagonists if promptly diagnosed. Persons who received one or more smallpox vaccinations before the disease was declared eradicated worldwide have little or no immunity and virtually every living person in the world is now susceptible to the disease. There is no treatment for smallpox and, to date, there is a limited supply of vaccine available in the U.S. The above-mentioned diseases are not meant to be all-inclusive since there are many food- or water-borne agents that could potentially be used in a bioterrorist event.

The complexity, scope, and potential consequences of a terrorist threat or incident require that there be a rapid and decisive capability to resolve the situation. The resolution to an act of terrorism demands an extraordinary level of coordination of crisis and consequence management functions and technical expertise across all levels of government. No single Federal, State, or local governmental agency has the capability or requisite authority to respond independently and mitigate the consequences of such a threat to national security.

The incident may affect a single location or multiple locations, each of which maybe a disaster scene, a hazardous scene and/or a crime scene simultaneously.

Differences Between WMD Incidents and Other Incidents

As in all incidents, WMD incidents may involve mass casualties and damage to buildings or other types of property. However, there are several factors surrounding WMD incidents that are unlike any other type of incidents that must be taken into consideration when planning a response. First responders' ability to identify aspects of the incident (e.g., signs and symptoms exhibited by victims) and report them accurately will be essential to maximizing the use of critical local resources and for triggering a Federal response.

1. The situation may not be recognizable until there are multiple casualties. Most chemical and biological agents are not detectable by methods used for explosives and firearms. Most agents can be carried in containers that look like ordinary items.

2. There may be multiple events (e.g., one event in an attempt to influence another event's outcome).

3. Responders are placed at a higher risk of becoming casualties. Because agents are not readily identifiable, responders may become contaminated before recognizing the agent involved. First responders may, in addition, be targets for secondary releases or explosions.

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

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

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

7. There will be a stronger reaction from the public than with other types of incidents. The thought of exposure to a chemical or biological agent or radiation evokes terror in most people. The fear of the unknown also makes the public's response more severe.

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

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

10. Specialized State and local response capabilities may be overwhelmed.

State of California Terrorism Guidance

The catastrophic attacks on the World Trade Center Building in New York City and the Alfred P. Murrah Federal Building in Oklahoma City shocked the nation into the reality that there are no domestic safe havens from acts of terrorism. These two apparently unrelated events punctuate our nation's vulnerability, and highlight California's risk of similar attack against its public officials, private and multi-national corporations, public infrastructure, and government facilities.

Historically, California has had a long experience combating terrorist groups, both domestic and international. Domestic terrorist groups in the state have been largely issue-oriented, while the few known internationally based incidents have mostly targeted the state's émigré communities and been related to foreign disputes. Today, however, both groups are more likely to be aligned nationally and/or internationally through electronic networking. The issues and politics of these groups remain essentially unchanged but now include increasing expressions of hatred for existing forms of government. The World Trade Center Incident demonstrates that international terrorist groups have the potential to operate with deadly effectiveness in this country. Such groups may offer no allegiance to any particular country but seek political or personal objectives that transcend national/state boundaries.

There is appropriate concern that such attacks as witnessed in Tokyo, New York City, and Oklahoma City could occur in California. A terrorist acting alone or in concert with any of the known national or international groups could readily commit acts of terrorism in California. The open availability of basic

shelf-type chemicals and mail order biological research materials, coupled with an access to even the crudest laboratory facilities, could enable the individual extremist or an organized terrorist faction to manufacture proven highly lethal substances or to fashion less sophisticated weapons of mass destruction. The use of such weapons could result in mass casualties, long term contamination, and wreak havoc to both the state and national economies.

The freedom of movement and virtually unrestricted access to government officials, buildings, and critical infrastructure afforded to California's citizens and foreign visitors, presents the terrorist with the opportunity and conditions of anonymity to deliver such devastation and its tragic consequences with only the crudest devices of nuclear, chemical, or biological content.

Terrorist incidents create a unique environment in which to manage emergency response. Local responders are typically the first on scene during an actual incident and local government has primary responsibility for protecting public health and safety. Ordinarily, the local first response will be conducted under California's Standardized Emergency Management System (SEMS) which forms the basis of California's concept of operations for managing any kind of emergency or disaster, including terrorist incidents. The local responders will manage all aspects of the incident until the FBI assumes command, by virtue of its legal authority, of the law enforcement aspects relating to identifying, apprehending, and neutralizing the terrorists and their weapons. Local and state authorities always maintain control of their response resources and continue to operate utilizing SEMS.

Governor's Office of Emergency Services Terrorism Response Plan

Los Angeles County Terrorism Early Warning (TEW) Group

Effective and rapid dissemination of indications and warnings to local emergency response agencies is an essential yet problematic element of terrorism management efforts. For bio-terrorist threats, such efforts must integrate ongoing real-time surveillance efforts. Terrorism Early Warning Groups are a multilateral, multidisciplinary effort to monitor open source data to identify trends and potential threats, monitor potential threat information during periods of heightened concern, assess potential targets and perform net assessments to guide decision making during actual events. TEW provides integrated threat and net assessment from a multi-jurisdictional perspective. City and county fire departments work together with emergency management, FBI, local law enforcement agencies, Department of Health Services, as well as other state and federal offices. The formation of TEW groups supports field response in the preparation for and response to acts of terrorism.

IAFC, October 2001 (et sec)

The Los Angeles Operational Area TEW Group provides Unified Command Structure with the impact of an attack on the operational area, gauges resource needs and shortfalls, continuously monitors and assesses situational awareness and status, and acts as the point of contact for inter-agency liaison in order to develop options for courses of action for incident resolution. TEW is an Emerging Threat Workspace (Civil Battle Lab) for stimulating National Strategy for emerging threat issues:

- Terrorism and Infrastructure Protection
- Public Order (Riots/Disturbances)
- Civil-Military Interoperability for Urban Operations
- Civilian Police (CIVPOL) for Peace Officers
- Networked Threats and Emerging Threats
- Counterterrorism Technology Test Bed

Utility Loss/Disruption/Substation

Utility Loss/Distribution/Substation was rated a HIGH PRIORITY HAZARD by the City of Burbank.

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.

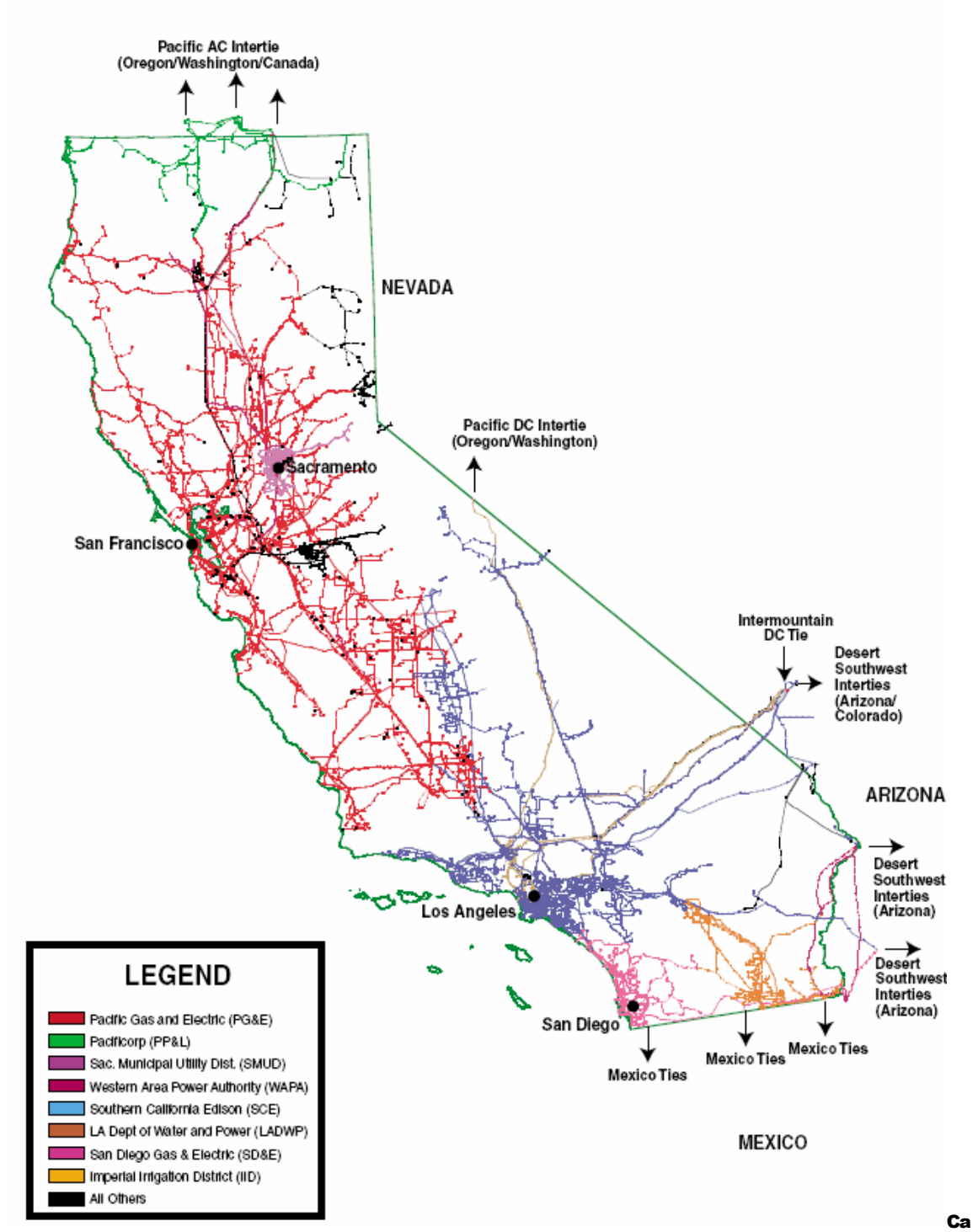
Drinking water is supplied to California residents through a myriad of governmental agencies, cities, districts, private utilities, mutual water companies, private businesses, and individually owned wells. There are over 10,000 public water suppliers in the state serving water to approximately 29 million 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



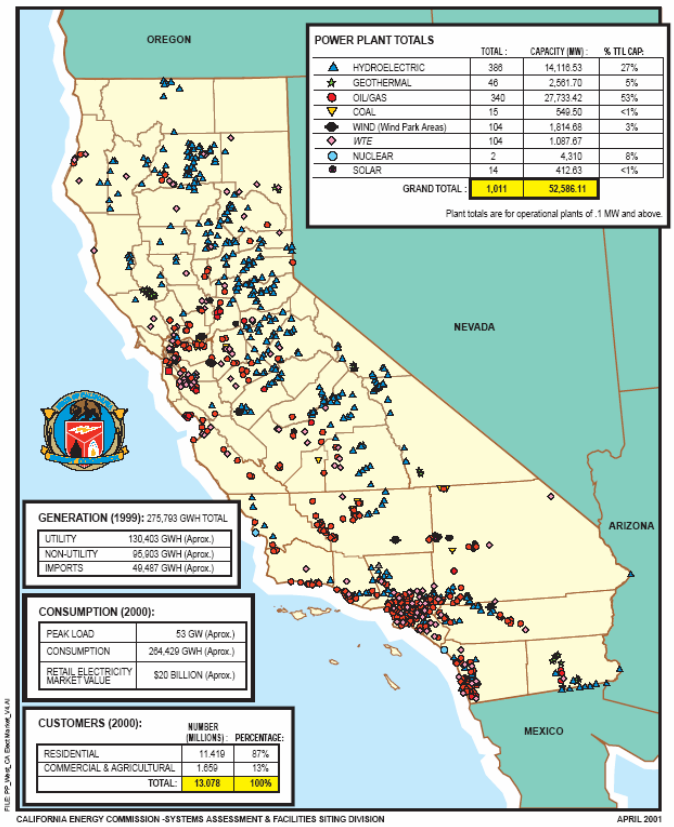
California Department of Energy

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.

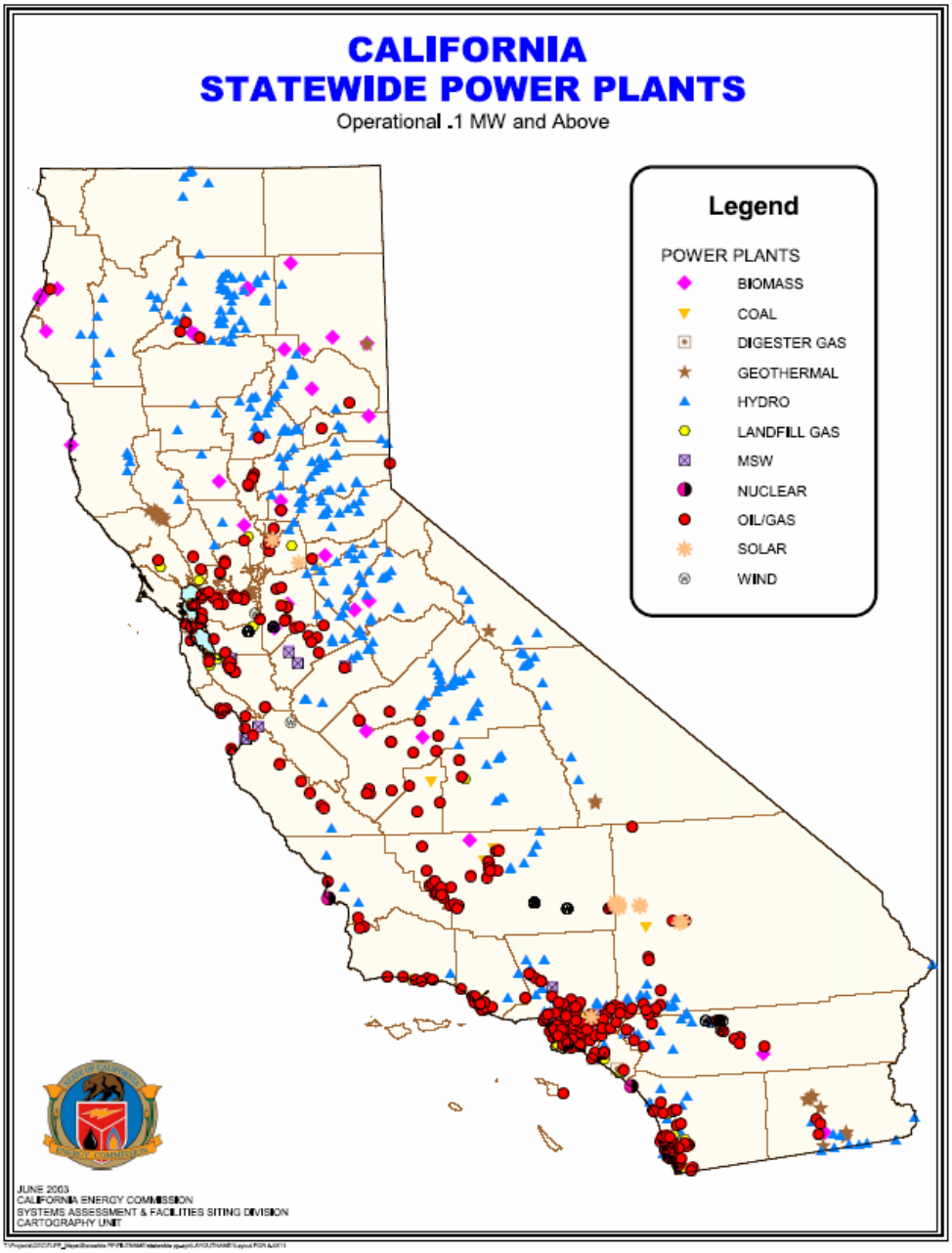
In addition, water and sewer treatment utilities may request partial or complete rotating outage exemption from electric utilities in times of emergency identified as requiring their service, such as fire fighting. The Water Division believes that it is reasonable to order electric companies to notify 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.

CALIFORNIA'S ELECTRICITY MARKET



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.



Water/Waste Water Disruption

Water/Waste Water Emergencies were rated a HIGH PRIORITY HAZARD by the City of Burbank.

Water

With a growing population and economy, increasing environmental concerns and vibrant agriculture industry at play, how we choose to collect, store, distribute, use and dispose of water has never been more critical.

Every drop of water not used by a household, farm or business can be used to create higher river flows to benefit fisheries and floodways. Likewise, recycled water stored in new reservoirs can be used to recharge over-drafted groundwater aquifers. In short, new and innovative ideas are on the table that will help California rework its waterworks so that it is not necessary to choose between the environment, the economy, and people's livelihoods and lifestyles.

From the northern reaches to the San Joaquin Delta, which provides two-thirds of the state's residents with their drinking water, California is under the gun to reconstruct and rehabilitate its water and wastewater systems. The challenge is being met on many fronts. On these pages you will find a summary of the water and wastewater challenges California faces today, along with the lowdown on solutions in the works.

Problems

- Our groundwater basins are over-drafted and our existing surface storage cannot meet future water demands, particularly in times of drought.

- The gap between water supply and demand in California is predicted to total 2.4 million acre feet during drought years and up to 6.2 million acre feet in drought years by 2020. (An acre foot is enough to meet the annual needs of between one and two households.) Six million feet is roughly triple the amount of water the Bay Area uses in a year. At the same time, growers, manufactures and businesses are demanding more reliable and better quality water.

- It can take 20 years or longer to develop and finance a supplemental water supply for new developments.

- About 894 gallons of water are needed to grow the food for the daily diet of an average person. On an annual basis, an individual's water use is about 326, 310 gallons.

- Some of our cities rely on water mains and sewers that are more than 100 years old.

- In 2001 California officials issued more than 2,000 beach closings and health advisories because of sewer spills and overflows. Spills and overflows typically happen because wastewater systems have not been upgraded to facilitate new growth, and sewer pipes have not been replaced in time to avert a main break.

- When it rains, at times as little as one-quarter inch, the volume of combined runoff and wastewater becomes too great for sewage treatment plants to handle, and the flow is diverted

to outfall points that discharge raw sewage, toxic industrial waste and floatables such as garbage and syringes.

- California needs an estimated $8.4 billion for local wastewater treatment improvements.

City of Burbank Water Supply

Burbank is primarily dependent on imported water which needs to be pumped to various storage facilities. This requires electricity. If either the Metropolitan Water District water supply lines or electrical power go down, Burbank would be limited to the water stored in the storage facilities. In addition, Burbank has a limited storage capacity that would only serve residents for a short period of time.

Solutions - Water

Through a state/federal partnership known as CALFED, for example, some $10 billion in expanded storage, increased recycling and conservation, ecological restoration of key watersheds, and improved water distribution and conveyance has been identified that over the next few decades help meet some of these challenges. Cities are expanding wastewater treatment systems, improving water distribution infrastructure, and developing local recycling programs as well, some using funds from the CALFED program.

To offset water shortages, the state's water recycling program needs more investment. In 1998, the last year it revised its state Water Plan, the California Department of Water Resources issued a 10-year capital improvement forecast calling for more than $1.6 billion in spending to ensure delivery of clean water. In addition, a state/federal partnership known as CALFED is overseeing a vast reworking of the state's water storage and distribution system. The CALFED program as it is known foresees $10 billion in environmental and ecological restoration projects, new storage facilities, recycling programs, water transfer arrangements to help strike a balance the state's competing water needs.

Solutions - Wastewater

State and federal water quality regulations require cities and other municipalities to upgrade wastewater treatment and distribution systems to prevent overflows during wet weather no later than 2014. Pipe replacement projects, construction of new retention ponds, increased recycling and conservation programs, and expanded treatment facilities are all part of the mix of solutions.

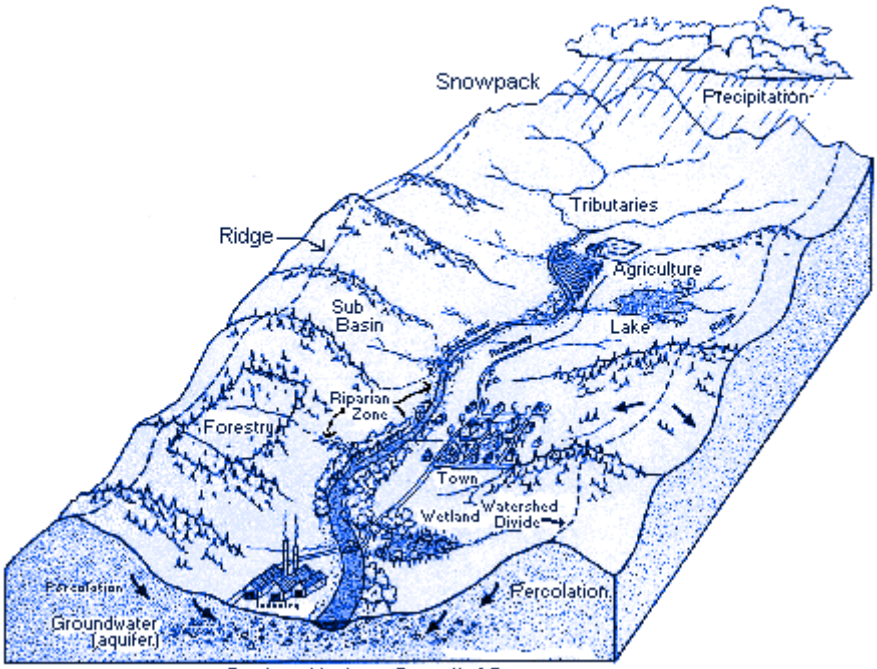
California Dept. of Water Resources, Water Education Foundation, Natural Resources Defense Council

Water Sheds

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. John Wesley Powell, scientist geographer, put it best when he said that a watershed is:

"that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community."

Watersheds come in all shapes and sizes. They cross county, state, and national boundaries. No matter where you are, you're in a watershed!



Produced by Lane Council of Governments

There are 6 water sheds serving Los Angeles County; Antelope-Fremont Valleys, Santa Clara, Los Angeles, San Gabriel, Santa Monica Bay, and San Pedro/Channel Islands.

The Small Watershed Program in California - PL 83-566 and PL 73-534

The USDA's Small Watershed Program assists local organizations in conducting watershed surveys and investigations, and in planning and installing structural and land treatment measures for watershed protection and flood prevention. In California, the Watershed Planning and Engineering staffs are responsible for implementation of these programs.

The watershed is the unit of landscape and framework around which to think together about the land and its role in peoples' lives. The lessons learned through the implementation of PL 78-534 and PL 83-566 - the ability to work with private landowners and communities to plan and install conservation measures on a watershed scale - forms the foundation upon which locally-led conservation is built and supported by NRCS.

Background

USDA's Small Watershed Program was authorized by the Flood Control Act of 1944, Public Law 78-534, and the Watershed Protection and Flood Prevention Act of 1954, Public Law 83-566. The original program, PL 78-534, was established for 11 selected watersheds throughout the country, including the

Los Angeles River and Santa Ynez River in California. The subsequent legislation, PL 83-566, was passed to expand the program to all of the nation's watersheds.

USDA's Small Watershed Program has three general purposes: 1) preventing damage from erosion, floodwater and sediment, 2) furthering the conservation development, utilization, and disposal of water, and 3) further the conservation and proper utilization of land.

The program applies to watersheds 250,000 acres and smaller. At least 20 percent of any project benefits must related directly to agriculture, including rural communities. A local sponsoring organization is needed to carry out, maintain, and operate works of improvement.

The program has two main components, each of which is funded separately: 1) watershed surveys and planning; and 2) watershed and flood prevention operations and construction.

Status of the Program in California

The Small Watershed Program in California has been used primarily for flood control, agricultural water management, and watershed protection work. There are 30 completed watershed projects in California and 15 operational projects. About 30 watersheds are currently receiving technical assistance for local planning activities.

From 1978 through 2002, over $100 million was spent in California under PL83-566 operations to install conservation measures. During this same time period, over $120 million was spent in 45 counties in California under Emergency Watershed Protection to provide emergency flood and fire repair work.

In fiscal year 2002, California received PL83-566 annual appropriations of $950,000 for watershed planning, $1,390,000 for technical assistance, and $3,351, 136 for installing practices.

Emergency Response Plans

All water systems serving a population of 3,300 or more (1,000 connections or more) must update their Emergency Response Plan (ERP) and send a completed certification form to EPA within 6 months of completing their Security Vulnerability Assessment (Security VA). All water systems are required to have an Emergency Notification Plan (ENP). CRWA is putting on a series of FREE ERP classes, which will include a free manual and a free CD that will assist you in updating or creating an Emergency Response Plan for your water system. It also includes a special section on how to prepare a Drought Response Plan as a key component of your ERP. All systems no matter what size are invited to attend and will benefit from this class, and attendees will earn contact hours for Distribution and Water Treatment certification renewal.

Ground Water

Ground water is an important component of our nation’s fresh water resources. The use of ground water is of fundamental importance to human life and is also significant to economic vitality. Inventories of ground water and surface water use patterns in the United States emphasize the importance of ground water. The United States Geological Survey (USGS) compiles national water use information every 5 years and publishes a report that summarizes this information.

Groundwater is a hidden resource. At one time, its purity and availability were taken for granted. Now contamination and availability are serious issues. The following should be considered:

- Scientists estimate groundwater accounts for more than 95% of all fresh water available for use.
- Approximately 50% of Americans obtain all or part of their drinking water from groundwater.
- Nearly 95% of rural residents rely on groundwater for their drinking supply.
- About half of irrigated cropland uses groundwater.
- Approximately one third of industrial water needs are fulfilled by using groundwater.
- About 40% of river flow nationwide (on average) depends on groundwater.

Thus, groundwater is a critical component of management plans developed by an increasing number of watershed partnerships.

Definition

Groundwater is the water that saturates the tiny spaces between alluvial material (sand, gravel, silt, clay) or the crevices or fractures in rocks.

Aeration zone: The zone above the water table is known as the zone of aeration (unsaturated or vadose zone). Water in the soil (in the ground but above the water table) is referred to as soil moisture. Spaces between soil, gravel and rock are filled with water (suspended) and air.

Capillary water: Just above the water table, in the aeration zone, is capillary water that moves upward from the water table by capillary action. This water can move slowly in any direction, from a wet particle to a dry one. While most plants rely on moisture from precipitation that is present in the unsaturated zone, their roots may also tap into capillary water or into the underlying saturated zone.

Aquifer: Most groundwater is found in aquifers-underground layers of porous rock that are saturated from above or from structures sloping toward it. Aquifer capacity is determined by the porosity of the subsurface material and its area. Under most of the United States, there are two major types of aquifers: confined and unconfined.

Confined aquifers (also known as artesian or pressure aquifers) exist where the groundwater system is between layers of clay, dense rock or other materials with very low permeability.

Water in confined aquifers may be very old, arriving millions of years ago. It's also under more pressure than unconfined aquifers. Thus, when tapped by a well, water is forced up, sometimes above the soil surface. This is how a flowing artesian well is formed.

Unconfined aquifers are more common and do not have a low-permeability deposit above it. Water in unconfined aquifers may have arrived recently by percolating through the land surface. This is why water in unconfined aquifers is often considered very young, in geologic time. The top layer of an unconfined aquifer is the water table. It's affected by atmospheric pressure and changing hydrologic conditions. Discharge and recharge rates depend on the hydrologic conditions above them.

Saturation zone: The portion that's saturated with water is called the zone of saturation. The upper surface of this zone, open to atmospheric pressure, is known as the water table (phreatic surface).

Water-bearing rocks: Several types of rocks can hold water, including:

- Sedimentary deposits (i.e. sand and gravel)
- Channels in carbonate rocks (i.e. limestone)
- Lava tubes or cooling fractures in igneous rocks

- Fractures in hard rocks

Groundwater and Surface Water Connection

Groundwater and surface water are fundamentally interconnected. It is often difficult to separate the two because they "feed" each other. This is why one can contaminate the other.

Hydrologic (water) Cycle

- As rain or snow falls to the earth's surface:
- Some water runs off the land to rivers, lakes, streams and oceans (surface water).
- Water also can move into those bodies by percolation below ground.

Water entering the soil can infiltrate deeper to reach groundwater which can discharge to surface water or return to the surface through wells, springs and marshes. Here it becomes surface water again. And, upon evaporation, it completes the cycle. This movement of water between the earth and the atmosphere through evaporation, precipitation, infiltration and runoff is continuous.

How Groundwater "Feeds" Surface Water.

One of the most commonly used forms of groundwater comes from unconfined shallow water table aquifers. These aquifers are major sources of drinking and irrigation water. They also interact closely with streams, sometimes flowing (discharging) water into a stream or lake and sometimes receiving water from the stream or lake.

An unconfined aquifer that feeds streams is said to provide the stream's baseflow. (This is called a gaining stream.) In fact, groundwater can be responsible for maintaining the hydrologic balance of surface streams, springs, lakes, wetlands and marshes.

This is why successful watershed partnerships with a special interest in a particular stream, lake or other surface waterbody always have a special interest in the unconfined aquifer, adjacent to the water body.

How Surface Water "Feeds" Groundwater

The source of groundwater (recharge) is through precipitation or surface water that percolates downward. Approximately 5-50% (depending on climate, land use, soil type, geology and many other factors) of annual precipitation results in groundwater recharge. In some areas, streams literally recharge the aquifer through stream bed infiltration, called losing streams. Left untouched, groundwater naturally arrives at a balance, discharging and recharging depending on hydrologic conditions.

Defining Combined Boundaries

Partnerships using the watershed approach to protect natural resources identify and understand the individual resources-water, soil, air, plants, animals and people-early in the process. This is why watershed partnerships select or define boundaries to address all natural resources - not just one. They realize that groundwater, surface water, air quality, and wildlife and human activities all affect each other.

Occasionally watershed partnerships run into difficulty combining boundaries of surface water (watersheds) and recharge areas (groundwater). If this occurs, consider combining surface and groundwater into a single, larger area. In other situations-for example if water is being transferred from one watershed or aquifer to distant users-there can be, and should be, two distinct areas. Thus, watershed partnerships' boundaries may combine the wellhead area, aquifer, watershed, or many other areas depending on the issue(s).

Common Boundaries

Aquifers are often difficult to delineate. It requires someone with an understanding of the aquifer, the geology, the surface above it, and the land that drains toward the surface.

An unconfined aquifer area often extends to the surface waterbody's (i.e. lake, river, estuary) watershed. When determining an aquifer protection area, pumping (working) wells are not considered. The biggest risk to an unconfined aquifer is contaminated water moving through the permeable materials directly above it. This area is known as the primary recharge area. Depending on the depth and overlying geologic characteristics, travel time from the surface to the aquifer can be relatively short.

Less permeable deposits located at higher elevations than the aquifer form a secondary recharge area. These areas also recharge the aquifer through both overland runoff and groundwater flow. Because they are less permeable and tend to be a greater distance from the aquifer, they often filter out contaminants.

Additional recharge areas to consider include an adjacent stream that potentially contributes to the aquifer through infiltration. When pumping wells are located near a stream or lake, infiltration can be increased. Infiltrating streams typically provide an aquifer with large quantities of water and a pathway for bacteria, viruses and other contaminants.

A confined aquifer area may be limited to the outcrop of the aquifer unit and its immediate contributing area. This area may actually be isolated from the location of water supply wells within the aquifer.

Semi-confined aquifers may receive water from both outcrop areas and overlying aquifers. Delineating the aquifer protection area can be extensive and complex.

Sole-source aquifers are delineated based on aquifer type - confined, semi - confined or unconfined - and local geologic and hydrologic conditions. Defined as providing a minimum of 50% of the water for its users, sole-source aquifers usually exist only where there simply are no viable alternative water sources.

Wellhead protection areas (also known as zone of contribution and contributing areas) are the surface and subsurface areas surrounding a well or field of wells (wellfield) supplying a public water system.

The area is calculated by determining the distance contaminants are reasonably likely to move before reaching a well. Some common methods for determining the wellhead protection area include:

- Arbitrary fixed radius
- Calculated fixed radius
- Simplified variable shapes
- Analytical method
- Numerical method
- Hydro-geologic mapping

When selecting the best method, consider available funds and the level of concern. Other factors to consider include the cone of depression and drawdown.

Surface watersheds are defined by a simple process of identifying the highest elevations in land that drains to the surface waterbody (i.e. lake, pond, river, estuary, etc.). Watersheds are all shapes and sizes, ranging from just a few acres to several million acres ... many smaller watersheds "nested" inside a larger watershed.

Most successful watershed partnerships work with a manageable size yet encompass all the different, but integrated, areas. This enables faster measurable progress and stronger ties between stakeholders and the waterbody they affect.

Threats to Groundwater

An increased quantity of groundwater is being withdrawn to meet the demands of a growing population. Some of the typical threats associated with this include overdraft, drawdown and subsidence.

Overdraft occurs when groundwater is removed faster than recharge can replace it. This can result in

- A permanent loss of a portion of its storage capacity
- A change that can cause water of unusable quality contaminate good water. In coastal basins, salt water intrusion can occur.

Generally, any withdrawal in excess of safe yield (the amount that can be withdrawn without producing an undesirable result) is an overdraft.

Drawdown differs significantly from overdraft. It results in a temporarily lowered water table generally caused by pumping. In this situation, the water table recovers when the supply is replenished.

Subsidence is one of the dramatic results from over-pumping. As the water table declines, water pressure is reduced. This causes the fine particles that held water to become compacted. In addition to permanently reducing storage capacity, the land above the aquifer can sink ... from a few inches to several feet ... causing a sinkhole. This can damage property and fields.

Inorganic compounds, pathogens and organic compounds can harm water quality, affecting the health of humans, fish and wildlife. Scientists continually learn more about contaminants, their sources and prevention practices.

Each state is responsible for designating uses for groundwater, surface waters, wetlands, etc. Designated uses include fishable, swim able, drinkable, recreational, agricultural, aquatic life, and more. Each state is also responsible for developing water quality standards for each use. For example, while most rivers are designated to be used for fishing, a few river sections are designated to be used for drinking water. The same is true for groundwater. Uses are defined and standards identified. A few groundwater uses and standards are:

- Drinking water
- Meet MCL* for pollutants
- Industrial process
- Quality & quantity criteria
- Stream baseflow

- Discharge quantity & quality

*MCL: Maximum Contaminant Level

Note that, for most groundwater uses, quality and quantity are important, while for surface water uses, generally quality is the primary concern (with the realization the quantity affects quality).

Inorganic Compounds include all compounds that do not contain carbon. Nutrients (nitrogen and phosphorus) and heavy metals are two examples.

- *Nitrates* can cause problems in drinking water or marine waters
- *Phosphorus* can reduce uses of fresh surface waters
- *Heavy metals* include selenium, arsenic, iron, manganese,
    - sulfur, cadmium and chromium and others. Some (iron,
    - manganese and arsenic) occur naturally

Pathogens, including bacteria and viruses, have been credited with causing more than 50% of the waterborne disease outbreaks in the U.S. *Cryptosporidium Parvum* and *Giardia* both commonly cause illnesses when consumed.

Organic Compounds include Volatile Organic Compounds (VOCs) like benzene, toluene, xylene; semi-volatile compounds like napthaline and phenol; PCBs and pesticides.

Potential Sources

Point sources are easily identified because they usually come out of a "pipe." Examples include sewage treatment plants, large injection wells, industrial plants, livestock facilities, landfills, and others. Regulated by the state water quality agency and the U.S. EPA, point sources are issued a National Pollutant Discharge Elimination System (NPDES) permit when they meet regulations.

Many point sources were established generations ago, before the threat they posed was understood. Some of these sources have been "grandfathered" into compliance with some regulations. Thus, you may find some point sources located in areas that would be considered inappropriate now.

Nonpoint sources refer to widespread, seemingly insignificant amounts of pollutants which, cumulatively, threaten water quality and natural systems. Examples of nonpoint sources include septic systems, agriculture, construction, grazing, forestry, recreational activities, careless household management, lawn care, and parking lot and other urban runoff.

Nonpoint sources are not required to have a permit. Individually, each may not be a serious threat, but together they may be a significant threat.

Other sources that aren't classified under point or nonpoint sources include underground petroleum storage systems and many large and small businesses like dry cleaners, restaurants, and automotive repair shops. Although a large number of underground storage tanks have been removed or upgraded,

a significant number remain. Businesses can threaten groundwater with a wide variety of potentially contaminating substances.

Groundwater Contaminant Sources

Source	Contaminant
Salting practices & storage	Chlorides
Snow dumping	Chlorides
Agricultural fertilizers	Nitrates
Manure handling	Nitrates, pathogens
Home fertilizer	Nitrates
Septic systems	Nitrates, pathogens
Urban landscapes	Hydrocarbons, pesticides, pathogens
Agricultural dealers	Hydrocarbons, pesticides, nitrates
Agricultural feedlots	Nitrates, pathogens
Solid waste landfills	Hazardous materials
Industrial uses RCRA 'C'	Hazardous materials
Industrial uses RCRA 'D'	Hazardous materials
Small quantity generators	Hazardous materials
Households	Hazardous materials
Gas stations	Hydrocarbons
Auto repair shops	Hydrocarbons
Recycling facilities	Hydrocarbons
Auto salvage yards	Hydrocarbons
Underground storage tanks	Hydrocarbons
Industrial floor drains	Hydrocarbons
Injection wells	Hydrocarbons
Junkyards	Hydrocarbons

Mitigation

The Watershed Management Approach

A quick review of key components of the local, voluntary watershed approach to protecting natural resources will help you evaluate groundwater management approaches and how they may be used in your particular situation. The most critical component to the watershed management approach is the involvement and consensus of all key stakeholders (or organizations representing them) at each step in the process. Other key components include:

- Assess natural resources-soil, water (including groundwater), air, plants, animals, and people.
- Identify and prioritize problems.
- Develop measurable objectives-based on local environmental, economic and social goals.
- Identify and agree upon strategies for reaching objectives.
- Implement strategies and assess results.

Some of the activities, as they pertain to groundwater, are described in this guide. For example:

- Determining boundaries of the groundwater and watershed areas is typically part of assessment.
- Discussing existing and future uses of water is part of setting goals.

- Defining pollutants and sources is part of assessment, goal setting and solution identification.
- Understanding various tools is part of identifying and implementing solutions.

Existing Groundwater Programs

Over the past 20 years many federal and state programs have been developed to improve management of groundwater. Four of the most useful can also easily be incorporated into your watershed plan. These include:

- *Comprehensive State Groundwater Protection Program*
- *Sole Source Aquifer Program*
- *Source Water Protection Program*
- *Wellhead Protection Program*

These approaches can be used in a complementary fashion to manage all resources, including groundwater, for multiple uses-ranging from human consumption to industrial processes to maintaining ecological integrity within a wetland.

Comprehensive State Groundwater Protection Program is a statewide program that looks at groundwater's uses, including drinking water, and its role in sustaining the health of surface waterbodies (rivers, streams, wetlands, marshes).

The Sole Source Aquifer Program, Source Water Protection Program, and Wellhead Protection Program all are intended to protect a drinking water supply. The programs generally are compatible with the *Comprehensive State Groundwater Protection Program,* but are applied to very defined geographic areas:

- *The Sole Source Aquifer Program* applies to the aquifer boundaries.

- *The Source Water Protection Program* applies to water that drains into a reservoir (used as a drinking water source) or intake.

- *The Wellhead Protection Program* applies to defined wellhead areas.

Special Issues

Although groundwater programs are often used within the watershed framework, there are some issues that may arise as you attempt to integrate them. These issues have been listed to simply make you aware of them. Each is best addressed through cooperation and consensus. Water quality use designations often do not reflect the presence of groundwater intakes for drinking water. Water quality criteria and drinking water maximum contaminant levels (MCLs) often are not consistent in terms of chemical specific values and parameters.

Minor dischargers and permitted management measures under the NPDES program may not sufficiently reduce the risk to drinking water intakes. Where agriculture activities are reducing drinking water quality, changes in management practices may or may not take a long time to result in water quality improvements depending on weather, geography etc. Source water areas for groundwater drinking supplies (wellhead areas) generally do not coincide with surface water drainage areas. Long-term drinking water treatment may be necessary for certain public water supply systems because of the nature of the contaminant sources and the size of the contributing area.

Mitigation & Management Tools

There are many, many tools that can be used to manage groundwater resources:

Zoning: Regulations are used to segregate different, and possibly conflicting, activities into different areas of a community. This approach can be limited in its ability to protect groundwater due to "grandfather" provisions.

Overlay Water Resource Protection Districts: Similar to zoning regulations in their goals of defining the resource, these ordinances and bylaws map zones of contributing boundaries and enact specific legislation for land uses and development within these boundaries.

Prohibition of Some Land Uses: These are not typically considered very creative tools. However, prohibition of land uses such as gas stations, sewage treatment plants, landfills, or the use/storage/transport of toxic materials is a first step towards the development of a comprehensive groundwater protection strategy.

Special Permitting: The special permitting process can be used to regulate uses and structures that may potentially degrade water and land quality.

Large Lot Zoning: Large lot zoning seeks to limit groundwater resource degradation by reducing the number of buildings and septic systems within a groundwater protection area.

Eliminating/Modifying Septic Systems: Septic system problems can be reduced or eliminated by extending or developing community sewage treatment systems. Other options include specifying minimum design requirements like mound systems.

Transfer of Development Rights: A government entity prepares a plan designating land parcels from which development rights can be transferred to other areas. This allows land uses to be protected (i.e. for a gas station) while assuring that these uses are outside sensitive areas.

Growth Control/Timing: Growth controls are used to slow or guide a community's growth, ideally in concert with its ability to support growth. One important consideration is the availability of groundwater.

Performance Standards: This assumes that any given resource has a threshold, beyond which it deteriorates to an unacceptable level. Performance standards assume that most uses are allowable in a designated area, provided that the use or uses do not and will not overload the resource. With performance standards, it is important to establish critical threshold limits as the bottom line for acceptability.

Underground Storage Tanks: Three additional protection measures are often adopted to enhance local water resource protection. They include:

- Prohibit new residential underground storage tanks
- Remove existing residential underground storage tanks
- Prohibit all new underground storage tank installation in groundwater and surface water management areas

Septic System Maintenance: Septic system maintenance is frequently overlooked. Many times the system will not function properly, causing "breakout" of solids at the surface, which can lead to bacterial contamination. In addition, when systems fail, any additives used can become contaminants.

Land Donations: Land owners are often in the position of being able to donate some land to the community or to a local land trust.

Conservation Easements: Conservation easements allow for a limited right to use the land. Easements can effectively protect critical lands from development.

Purchase Lands: Many communities purchase selected parcels of land that are deemed significant for resource protection.

Well Construction/Closure Standards: Wells are a direct conduit to groundwater. Standards for new well construction, as well as identification and closure of abandoned wells, can prevent groundwater from being contaminated.

Groundwater Protection Tools

Technique	Tool
Zoning Districts	Overlay Groundwater Protection
Prohibit Various Land Uses	Special Permitting
Large Lot Zoning	Transfer of Development Rights
Cluster/PUD Design	Growth Controls/Timing
Performance Standards	Geographic Information Systems
Overlay Wetlands	Identify Local Wellhead Protection Areas
Subdivision Control	Drainage Requirements
Growth Management in Sensitive Areas	Health Regulations
Underground Fuel Storage Systems	Small Sewage Treatment Plants
Septic Cleaner Bans	Septic System Upgrades
Toxic & Hazardous Material Regulations	Private Well Protection
Voluntary Restrictions	Sale, Donation or Trust
Conservation Easements	Limited Development
Other non-regulatory	Monitoring
Contingency Plans Hazardous Waste Collection	
Public Education Land Banking	

Groundwater Management Practices

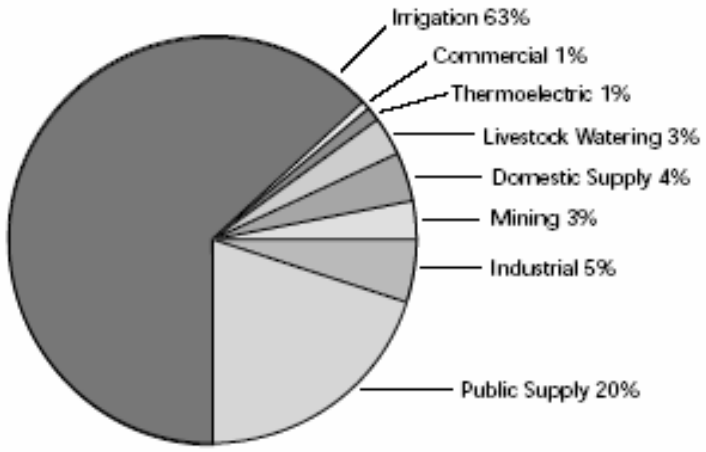
Zoning Districts	Practices
Groundwater recharge	Impervious area restriction
Artificial wetlands	Grass lined channels
Impoundment structures (ponds)	Subsurface drains (tiles)
Infiltration trenches	Native tree and shrub plantings
Pollutant reduction	Buffer strips
Filter strips	Riparian zones
Pollution prevention	Soil nitrate testing
Integrated pest management	Manure testing
Variable rate applications	Abandoned well closure

The latest USGS report was issued in October 1998 for the 1995 water year. The USGS report shows that ground water provides water for drinking and bathing, irrigation of crop lands, livestock watering, mining, industrial and commercial uses, and thermoelectric cooling applications.

Figure 1 illustrates how ground water use is proportioned among these categories. As shown, irrigation (63%) and public water supply (20%) are the largest uses of ground water. About 77,500 million gallons of ground water are withdrawn daily.

Figure 1

National Ground Water Use



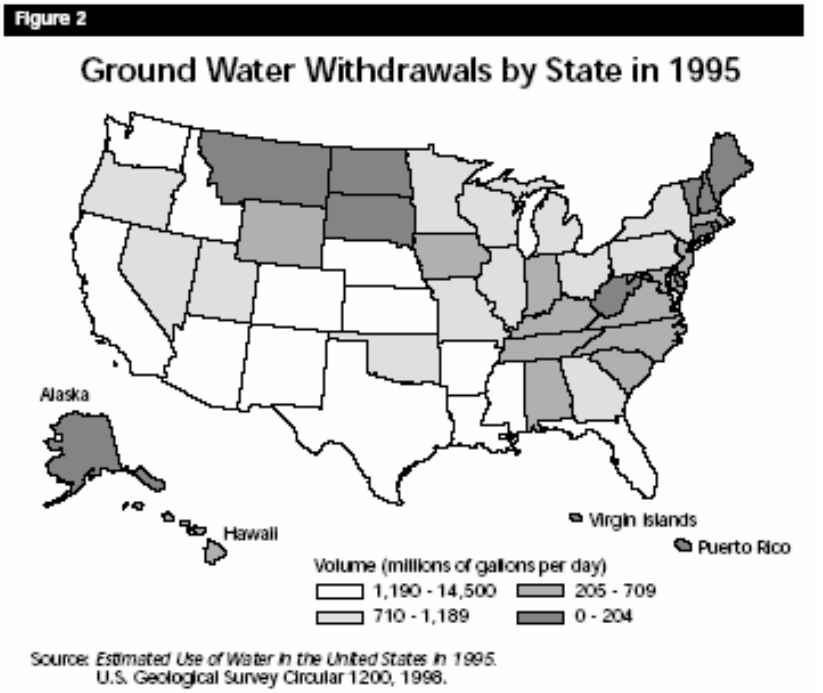
Source: *Estimated Use of Water in the United States in 1995.* U.S. Geological Survey Circular 1200, 1998.

In 1995, the USGS reported that ground water supplied 46% of the nation's overall population and 99% of the population in rural areas with drinking water. Our nation's dependence on this valuable resource is clear.

Every state uses some amount of ground water. Nineteen states obtain more than 25% of their overall water supply from ground water. Ten states obtain more than 50% of their total water supply from ground water.

Each state uses its ground water differently. Ground water use in individual states is a result of numerous interrelated factors generally associated with geography and climate, the principal types of business activities occurring in the state, and population distribution. Fresh ground water withdrawals during 1995 were highest generally in the western states, primarily to supply an increasing population and to sustain important agricultural activities.

Figure 2 shows the volume of ground water withdrawn by states. The 13 states that have the greatest withdrawals account for 69% of all ground water that is withdrawn nationally.

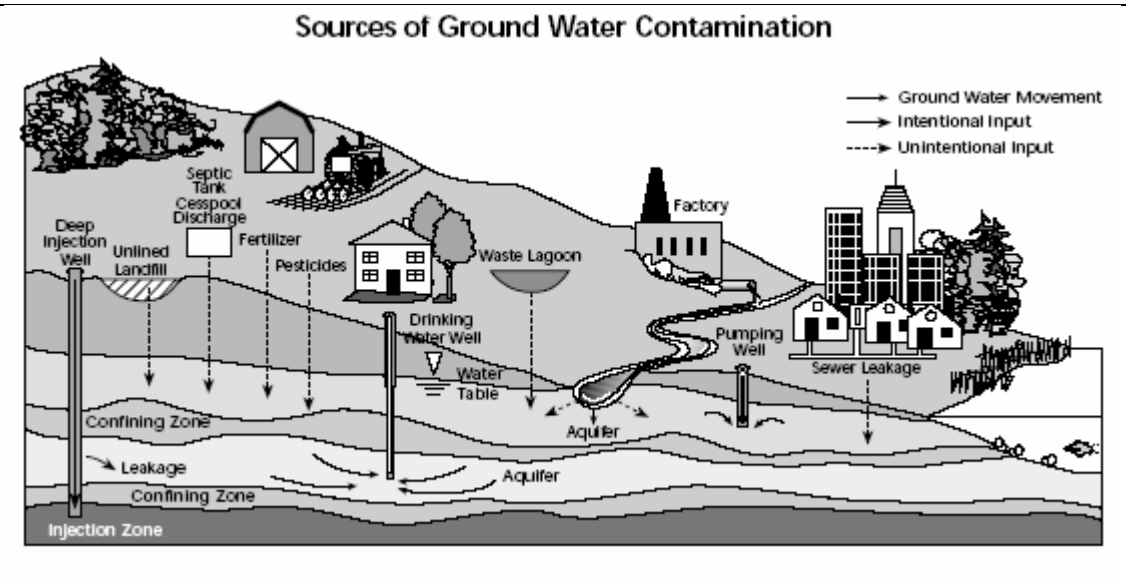


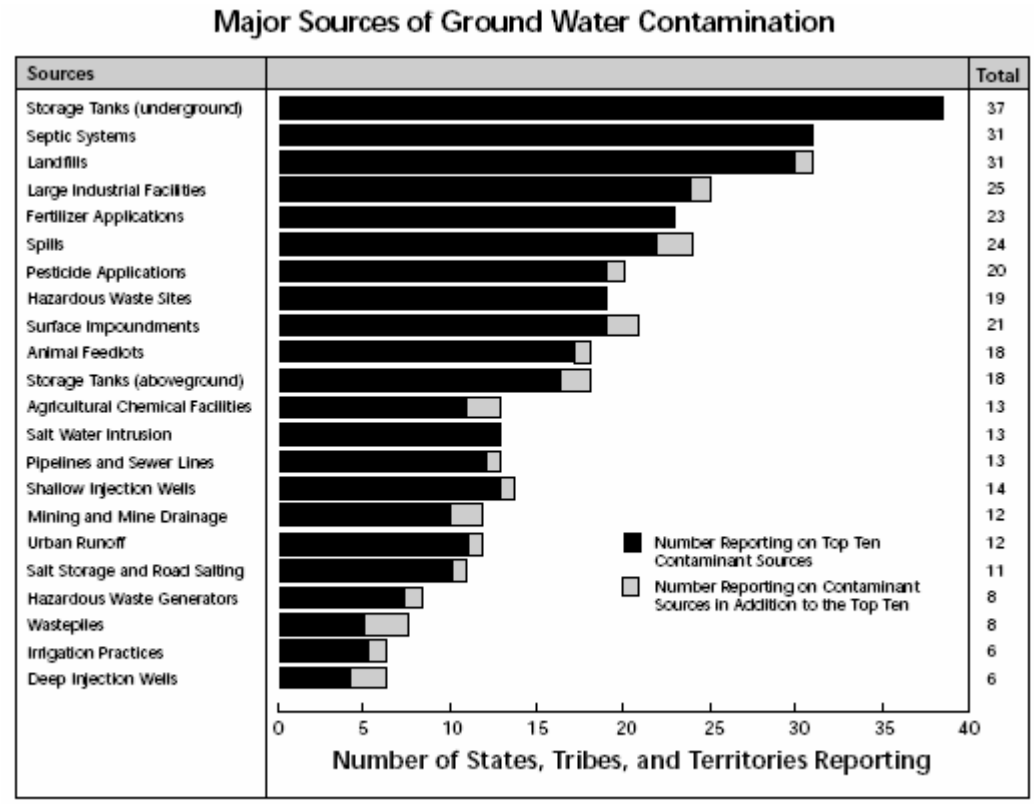
Sources of Ground Water Contamination

Ground water quality may be adversely impacted by a variety of potential contaminant sources. It can be difficult to identify which sources have the greatest impact on ground water quality because each source varies in the amount of ground water it contaminates. In addition, each source impacts water quality differently.

An EPA/state workgroup developed a list of potential contaminant sources and requested each state to indicate the 10 top sources that potentially threaten their ground water resources. States added sources as was necessary based on state-specific concerns. When selecting sources, states considered numerous factors, including the number of each type of contaminant source in the state

- The location relative to ground water sources used for drinking water purposes
- The size of the population at risk from contaminated drinking water
- The risk posed to human health and/or the environment from releases
- Hydrogeologic sensitivity (the ease with which contaminants enter and travel through soil and reach aquifers)
- The findings of the state's ground water assessments and/or related studies.





EPA,

"National Water Quality Inventory"

Methyl Tertiary Butyl Ether (MTBE)

Senate Bill 521 was introduced February 24, 1997 in response to a growing awareness of the possible environmental and health effects associated with the use of Methyl Tertiary Butyl Ether (MTBE) as an oxygenate blending agent in gasoline fuels throughout California (Appendix A). Since 1979, MTBE had been used in the State as a replacement for tetraethyl lead and as an octane booster. Although used in California since 1979 in volumes ranging from 0.5 to 3.5 percent, the volumes of MTBE in gasoline have increased to 11 percent since 1996. SB 521, which became effective January 1, 1998, called for the University of California to perform an assessment of the benefits and risks associated with the uses of MTBE in California.

This assessment report addresses: 1) the current impacts of MTBE to the state's groundwater used for drinking; 2) risks to the state's groundwater resources associated with MTBE leaking from storage tanks and other petroleum storage and conveyance facilities; and 3) potential future risks to the state's groundwater should MTBE continued to be used.

The general approach was to compile statewide data on the occurrence of MTBE groundwater contamination. The data consisted of MTBE detections and concentrations at leaking underground storage tank sites from Regional Water Quality Control Boards and MTBE detections and concentrations in water supply wells based on information from the Department of Health Services, Local Primacy Agencies, and Regional Water Quality Control Boards. We used various modeling approaches to then assess potential future impacts of MTBE on groundwater resources, focusing primarily on plume behavior in aquifer systems consisting of alluvial materials (i.e., sand, gravel, silt and clay). This report also includes specific information on MTBE impacts on groundwater in the Tahoe Basin.

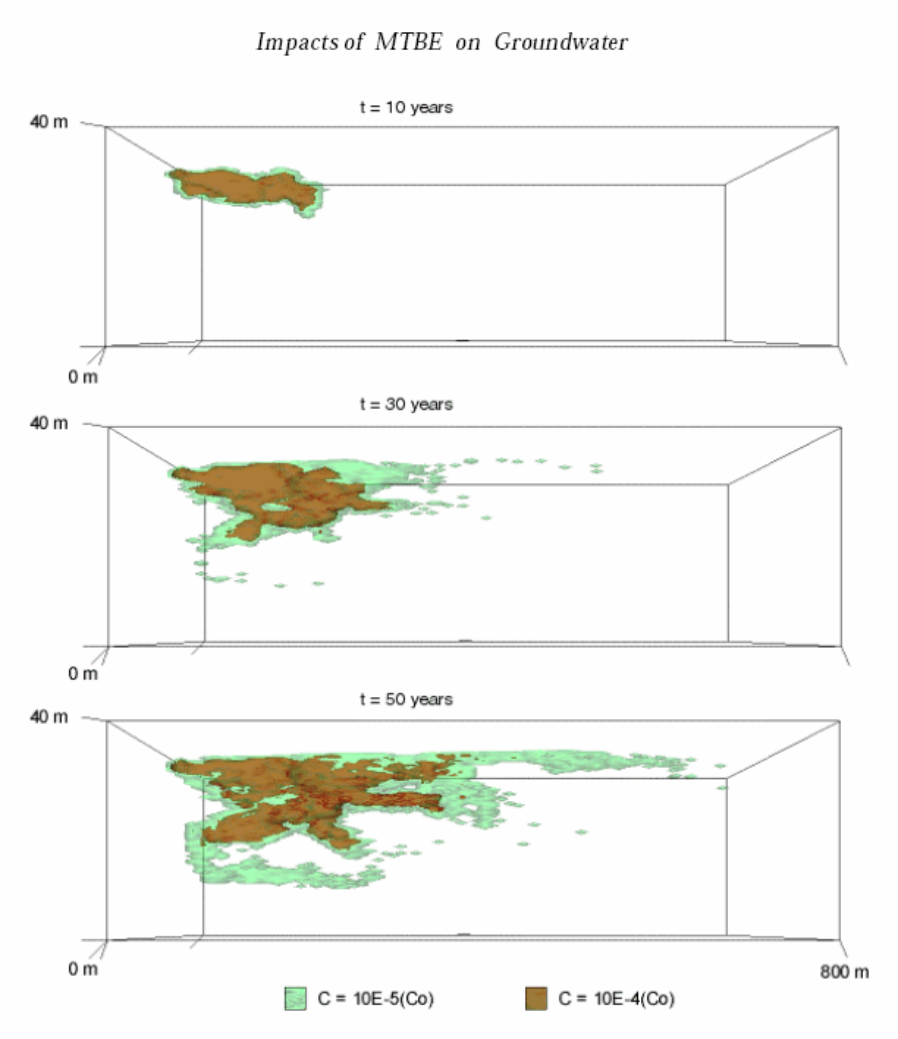
A recent investigation into the impacts of MTBE on California groundwater by Happel et al. (1998) provided an important foundation for this study. The analysis of groundwater impacts contained herein complements the work of Happel et al. (1998) by accumulating more recent statewide information with broader geographic coverage. Moreover, we use plume length statistics compiled by Happel et al. (1998) as a basis for calibrating models that simulate future MTBE plume growth.

The use of MTBE in gasoline has increased steadily since it was first approved for use in gasoline by the United States Environmental Protection Agency (USEPA) in 1979. MTBE is produced from isobutene, a waste product of the petroleum refining process. In 1994, MTBE was ranked as the eighteenth most produced chemical in the United States. By 1995 it was ranked twelfth, and by 1997 it was ranked second (OEHHA, 1998). MTBE was used in California's lead phase out program in 1979 at volumes up to 2 percent as a lead substitute and octane booster.

The US EPA approved use of MTBE in 1981 up to 10 percent and in 1988 approved its use up to 15 percent by volume (CAEPA, 1998). As early as 1988, MTBE use in southern California had begun to increase. In 1988, a refiner introduced an environmentally clean fuel in California that included 6 to 8 percent MTBE by volume. This refiner reportedly supplied 30 percent of the fuel in California of which approximately 20 percent of this refiner's sales was the environmentally clean fuel. This fuel was sold principally in southern California (D. Simeroth, personal communication, 1998).

The complete phase out of lead in fuel occurred in 1992, at which time the Winter Time Oxygenate Program began in California. There was an increased use of MTBE in the southern part of the state, with longer wintertime intervals and an earlier commencement of the year-round oxygenate program starting in 1995 rather than 1996. After March 1, 1996, all gasoline sold in California was Phase 2 reformulated gas containing 11 percent by volume MTBE. Approximately, 92 billion gallons of MTBE was produced in 1997 (Zogorski et al., 1998). California is reportedly the third largest worldwide

consumer of MTBE, second only to the rest of the United States and the former Soviet Union (OEHHA, 1998).



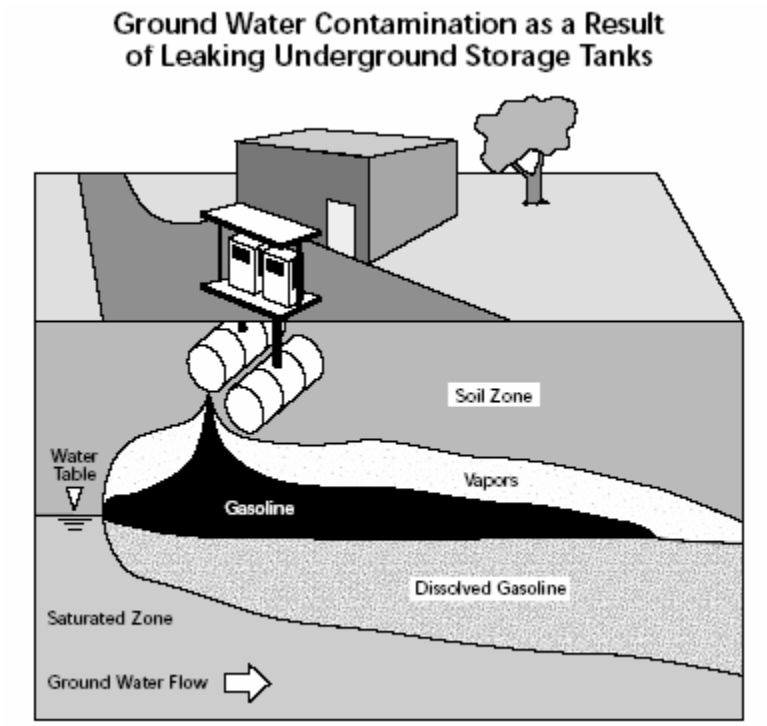
3-D simulated MTBE plume snap shots at (top to bottom) 10, 30, and 50 yr. Total thickness of the box is 40.5 m, and total length is 810 m. Regional flow is left to right. Screened interval of the pumping well is located in the center of the domain at a depth of 20 m.

University of California at Davis; "Impacts of MTBE on California Groundwater"

Sources of MTBE in Groundwater

MTBE sources of groundwater contamination include leaking underground fuel tanks (LUFT's), above ground storage tanks, farm tanks, leaking petroleum fuel pipelines, underground storage tanks containing fuels other than gasoline, surface spills due to automobile or tanker truck accidents, surface spills due to abandoned or parked vehicles, MTBE contaminated surface water, and precipitation. The LUFT sites are numerous, widely dispersed, proportional to the state's population, and involve enormous volumes of fuel products. As of June 30, 1998 there were 32,779 known sites where chemical compounds, including gasoline and non-gasoline products, were discharged to the environment from underground storage tanks. Ninety percent of these discharges involve petroleum products.

University of California at Davis; "Impacts of MTBE on California Groundwater"



Ground Water Protection

The responsibility for ground water protection collectively belongs to government agencies at the federal, state, and local levels. Federal and state governments regulate ground water through laws, regulations, and policies. In many cases, state and local laws are stricter versions of federal legislation, which serves as a valuable baseline on which state and local laws can build.

At the federal level, the Clean Water Act (CWA) ensures protection of surface waters designated, in part, for use as drinking water. Other environmental laws—the Safe Drinking Water Act (SDWA) (which includes the Wellhead Protection [WHP] Program, the Sole Source Aquifer [SSA] Program, and the Underground Injection Program); the Resource Conservation and Recovery Act (RCRA); the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA); and the

Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)—provide authorities, financial support, and technical assistance to protect sources of drinking water, especially ground water.

EPA is developing a regulation on ground water that specifies the appropriate use of disinfection and addresses other components of ground water systems to ensure public health protection. Various studies seem to indicate that the number of ground water sources with evidence of fecal contamination is significant. EPA is analyzing the data to determine if they represent public wells nationally. The proposed rule also encourages the use of alternative approaches, including best management practices and source control.

EPA, "National Water Quality Inventory"

Wastewater

Reclamation and Disposal System

The Burbank Water Reclamation Plant is located on West Chestnut Street adjacent the Burbank Western Flood Control Channel in the middle of the City. About 220 miles of pipeline carry the sewage generated in Burbank to the Burbank Water Reclamation Plant (BWRP). Some of the reclaimed water is used in the cooling towers at the City's Steam Power Plant as well as for landscape irrigation in various places in the City; the remainder of the reclaimed water is then discharged into the Burbank Western Channel. The BWRP lies in an area identified as being susceptible to liquefaction; this means that during an earthquake, the ground movement under the facility may render part or all of the wastewater treatment facility inoperable. Most of Burbank's sewage flows to the Burbank Water Reclamation Plant by means of gravity; only a small portion of the City's wastewater needs to be pumped into the plant. This means that after an earthquake, even if there is no power in the city, the sewage will continue to flow to the treatment facility via a system of pipelines, assuming the pipelines are intact. In the event that the Burbank treatment facility is partially or totally unable to treat the accumulating sewage, it has two options: to divert the untreated sewage to the Los Angeles North Outfall if the bypass lines are unaffected, or to let the untreated sewage flow into the Burbank Western Channel .

Normally, under contract with the City of Los Angeles, Burbank diverts a small portion of its sewage to the Los Angeles Hyperion Treatment Plant system via the North Outfall Sewer (NOS). In the event of an emergency rendering the BWRP inoperable, Burbank may be able to divert all or part of its untreated sewage directly into the NOS; this however is only possible if the NOS is not damaged and the Burbank pipeline system needed to carry the diverted sewage to the NOS is not damaged. If sewage cannot be treated at the BWRP or diverted to the NOS, it may be necessary to let the untreated sewage flow into the Burbank Western Channel and disinfect it with chlorine if possible. In the event of such a release into the Burbank Western Channel, public notices would be ~~are~~ issued and reports made to the Los Angeles County Department of Public Works the Regional Water Quality Control Board and other regulatory agencies.

Burbank's vast network of sewer pipelines was constructed, for the most part, in the 1930's and 40's and consists primarily of clay pipes. These pipes are maintained by the Public Works Department and were inspected using video cameras which travel along the sewer lines underground. Severe shaking and ground instability brought on by a large earthquake can break or crack these pipes causing seepage of raw sewage into the soil and possible groundwater contamination. Public health regulations require that underground water and sewer lines be laid a distance apart and that the water lines be laid above the sewer lines; this is to protect against contamination of drinking water in the event that both pipelines are broken.

A significant amount of electricity is needed to run the wastewater treatment facility and to pump sewage along the pipes in certain areas of the city. When a power failure occurs, either as the result of an earthquake or other disaster, the BWRP is unable to function. The facility does not have an on site alternate power source; it relies on power generated by the City power plant or electricity imported from the statewide grid system. An on-site electrical generating system which would be used only in the event of a major emergency is considered not to be cost effective due to high capital investment costs, space constraints and stringent and costly air quality requirements of such a system required by the Air Quality Management District. Following an earthquake, the BWRP may be without electricity, and therefore inoperable, for several days until local power is restored or the regional grid system is restored and the transmissions system repaired.

At present the BWRP is served by two electrical substations; should these substations not be able to deliver the necessary power the facility has no power.

Chlorine is still the primary disinfecting agent used in the wastewater treatment process. This toxic chemical is carefully regulated and a detailed "Risk Management and Prevention Program" for the handling chlorine at the plant has been submitted to the Environmental Protection Agency. In addition, continuous air monitoring systems are located in the chemical storage and application facilities for detecting any leaks. There is an emergency generator to supply power to the chlorine scrubber building in the event of a leak during a power outage. Chlorine is currently being phased out and replaced with a sodium hypo chloride disinfection process.

In the event of an emergency, such as an earthquake, the BWRP is linked to Burbank's EOC by means of telephone and radios.

Inherent Danger to Waste Water Systems

CALIFORNIA WASTEWATER TREATMENT OPERATOR ADMITS TO WATER TAMPERING

FOR RELEASE: FRIDAY, APRIL 9, 1999

CALIFORNIA WASTEWATER TREATMENT OPERATOR ADMITS TO WATER TAMPERING

Bernardino Lopez, former wastewater treatment plant operator for the Niland Sanitary District, pleaded guilty on March 29 in U.S. District Court for the Southern District of California in San Diego, to violating the Clean Water Act (CWA). Lopez admitted that in August and September of 1998, he repeatedly added chlorine to wastewater samples that were to be tested for E. coli. bacteria. The samples were used to develop monthly reports to the Regional Water Quality Control Board. Adding chlorine to the samples concealed the fact that both treatment plants were discharging wastewater with E. coli. levels that exceeded the limits allowed in their CWA National Point Discharge Elimination System permits. Human exposure to wastewater containing excessive levels of E. coli. can cause skin and intestinal infections. Wastewater from both plants flows into the Salton Sea. When sentenced, Lopez faces a maximum penalty of two years imprisonment and/or a $10,000 fine. This case was investigated by the Imperial County Environmental Task Force, which includes EPA's Criminal Investigation Division, and was prosecuted by the U.S. Department of Justice.

Hazardous Materials Incidents

Hazardous Materials Incidents were rated a HIGH RISK PRIORITY by the City of Burbank.

A hazardous material is any quantity of a substance which poses a threat to life, health or property. This includes a wide variety of solids, liquids and gases, all of which could be classified as hazardous. Thousands of new hazardous chemicals have been developed in this country since 1945 and more are being developed every day.

There is growing emphasis at all levels of government about protecting the environment for future generations and correcting existing environmental problems. With the proliferation of toxic chemicals, and processes which make use of these chemicals, more and more attention is being paid to the health hazards posed by these chemicals especially in or adjacent urban areas. In the second half of the 1980s, numerous state regulations for dealing with hazardous materials were put into place. These regulations are continually being updated and augmented. The Governor's Office of Emergency Services (OES) develops regulations for the reporting, monitoring and dealing with hazardous materials. According to state law, all businesses that handle specific quantities of hazardous chemicals must provide an annual inventory to the BFD and must develop, biannually, Business Plans for an emergency response to an accidental chemical release. As first responders to a hazardous material incident with the City of Burbank, the BFD has been designated as the administrative agency for collecting the mandated disclosure information.

Hazard Analysis

Hazardous materials, and especially their use in urbanized areas, have been identified as an increasing problem over the past several years. There is a definite risk of an accident involving toxic or hazardous materials occurring in the City of Burbank. There are several possible sources for such a hazardous materials incident in Burbank, including the transportation of hazardous or toxic chemicals through the City, the airport, industries and fixed facilities that use or produce hazardous chemicals, underground pipelines and clandestine dumping. Each of these sources is discussed below.

Transportation-Related Hazards

The greatest toxic chemical risk to the City involves a hazardous materials accident on the roads and railways passing through Burbank or at the airport. The BFD and other City officials are not always made aware of potentially hazardous materials that pass into or through the City. Written notification is given only in specific instances required by the Department of Transportation, such as the transport of large quantities of certain toxic substances and hazardous wastes, or by the Department of Defense. These notifications are infrequent, and it is likely that significant quantities of hazardous materials enter the City without any notification at all. Transportation-related hazardous materials incidents can range from a chlorine spill resulting from an overturned pool maintenance vehicle to a derailed train car or tank car hauling toxic waste products or to an aircraft incident in the air that may release toxic cargo.

Streets and Highways

There is the possibility that a major hazardous materials incident will occur as the result of an accident on one of the highways or streets in the City. Highway 134 and Interstate 5 both cross through the City of Burbank. Both routes carry commercial vehicles that transport hazardous materials such as petroleum products, industrial wastes and toxic gases. An accident of this type could close the freeway

for several hours requiring traffic to detour through Burbank streets. In the event of an accident involving a vehicle carrying toxic gas, such as chlorine, populated areas adjacent the highway would have to be evacuated.

Rail

There are two rail lines that traverse the City of Burbank. They run through the northwestern portion of the City and merge at the intersection of Victory and Burbank boulevards continuing southeasterly into Glendale. These two lines running through the northwestern sector of the City carry both passengers and freight trains.

The likelihood of a hazardous materials incident occurring as the result of a railroad mishap is less than that of an incident on the highways, yet the severity would be much greater because of the number of rail tanker cars that could be involved, the large quantities of toxic material contained in each car, and the potential for chemicals and explosive substances mixing. Since the Interstate 5 highway parallels and intersects the rail lines in various locations, it is possible that a hazardous materials incident on either mode of transportation could impact the other.

Airport

A hazardous materials incident involving an aircraft is the least probable of all transportation related incidents. An aircraft-related incident could involve an aircraft shipping hazardous material or an aircraft fuel spill. A hazardous materials incident occurring on the Airport premises is first responded to by the Airport Fire Department which has the necessary equipment and trained personnel to contain the incident. Command is then transferred to the BFD upon their arrival. Should the incident occur outside the boundaries of the airport, the Airport Fire Department could assist the City of Burbank HazMat Unit and other BFD units.

Fixed Facility/Industry

Burbank has several facilities, both private and City-owned, which manufacture, warehouse and/or process toxic chemicals and/or which generate hazardous waste materials. An accidental spill or other type of hazardous materials incident at one of these facilities is the second most likely scenario threatening the City, second only to a transportation-related incident.

State law requires all businesses that handle specific quantities of hazardous materials to provide an annual inventory to the BFD as well as develop, biannually, business plans for responding to a hazardous materials incident. Over 600 businesses in Burbank handle toxic materials in amounts which require them to provide inventories and emergency plans to the BFD. These facilities are located in both commercial and industrial zones.

City-owned facilities which house substantial amounts of a hazardous material are:

- City of Burbank Water & Power Yard
- City of Burbank Water & Power Valley Pump Station
- City of Burbank Water Reclamation Plant

Each of these facilities has large amounts of chlorine on site.

Pipelines

There are several large underground pipelines in the City which, if broken, would result in major hazardous materials incidents: two are petroleum pipelines and the others are natural gas pipelines. These pipelines cross the Verdugo Fault Zone.

The Four Corners Pipeline Co. has a 14-inch petroleum product line which runs from north to south following Glenoaks Boulevard to Tulare Avenue turning southward on Sixth Street into the City of Glendale.

Pacific Pipeline System, Inc. (PPSI) has completed construction of a 132-mile crude oil pipeline which is used to transport oil produced in the San Joaquin Valley and offshore Santa Barbara County to Los Angeles area refineries. This 20-inch pipeline crosses through the City of Burbank along the Southern Pacific Railroad right-of-way, entering the City at Hollywood Way in the north and following the tracks along San Fernando Boulevard to the Glendale border. It is likely that the amount of crude oil currently transported through Burbank via other modes will be reduced; and the pipeline could replace the surface transport of crude oil by train, marine tanker and trucks, thereby reducing the risks associated with these modes of transport.

Hazards associated with this pipeline relate to potential crude oil spills, fires at the pump stations and/or along the pipeline right-of-way. The hazards associated with potential oil spills, and subsequent fires and impacts on resources, will be reduced by measures that PPSI will incorporate into the pipeline's design relating to oil spill prevention and response. An Oil Spill Contingency Plan for the pipeline must be reviewed and approved by the California Public Utilities Commission (CPUC) and local response agencies prior to the start of pipeline operation.

A 30-inch Southern California Gas Company natural gas pipeline follows Glenoaks Boulevard southeasterly into the City of Glendale. Other, somewhat smaller, high pressure natural gas pipelines follow Hollywood Way, Verdugo Avenue and Burbank Boulevard. Portions of these pipelines are adjacent the largest concentrations of industrially zoned land in the City, and parallel the Interstate 5 Freeway and the Southern Pacific Railroad lines.

A ruptured petroleum products pipeline could result in several hazards including soil and groundwater contamination, property damage, traffic congestion and health hazards; areas around the spill could have to be evacuated. A ruptured natural gas pipeline poses a serious danger from explosion and fire, threatening lives, property and disrupting traffic; evacuation in the area of a natural gas pipeline explosion may be necessary.

Clandestine Dumping

Clandestine dumping is the criminal act of disposing of toxic materials and hazardous waste products on public or private property. As the costs and restrictions increase for legitimate hazardous waste disposal sites, it can be anticipated that illegal dumping of hazardous materials will increase.

The large unpopulated industrial areas of Burbank and the numerous acres of remote undeveloped hillside in Burbank provide ample opportunity for illicit dumping of toxic materials. This posses a threat to humans and animals who unwittingly come in contact with the toxic materials, and can leach into soils and groundwater creating a serious environmental hazard.

Asbestos

Asbestos is a naturally occurring mineral fiber that has been used extensively in construction and many other industries. Nearly every building contains asbestos in some form. It has been widely used because of its special properties; asbestos is very resistant to destruction by heat or chemicals and its fibers are extremely durable. These characteristics led to its wide use in wall insulation, paint, surfacing materials, ceiling and flooring materials, cement filler and a variety of other products.

Asbestos has been shown to cause cancer of the lungs and stomach when inhaled or ingested. In order for asbestos to be a health risk, asbestos fibers must be released from the material and be present in the air for people to breath. Studies have shown that the mere presence of asbestos-containing material in homes and buildings does not result in increased exposure of occupants. However, disturbing or removing asbestos-containing products--such as during construction and remodeling--can result in release of asbestos fibers into the air, posing a serious health risk.

Federal, state and regional agencies are concerned with various aspects of asbestos as a hazardous material. These agencies regulate the removal and disposal of asbestos-containing products. The federal Environmental Protection Agency (EPA) deems any exposure to asbestos fibers to be a health risk and requires that any work dealing with asbestos be done by trained personnel. Effective January 1, 1990, the South Coast Air Quality Management District (SCAQMD) is primarily concerned with asbestos removal and emissions into the air. The SCAQMD Rule 1403 strengthened current federal asbestos regulations. Failure to comply with the provisions of this rule can result in a penalty of up to $25,000. Rule 1403 mandates how building owners or their contractors are to report, remove, handle, label, store and dispose of asbestos containing materials. The California Contractors State License Board licenses and regulates all contractors who are qualified to do asbestos work in buildings. The California Division of Occupational Safety and Health (Cal/OSHA) is primarily concerned with methods of removal and focuses on employee training and exposure. Cal/OSHA registers all contractors who perform asbestos abatement work and tests and certifies all asbestos abatement consultants.

Building owners or operators are responsible for making sure that

- The contractor is certified to handle asbestos (California State Contractors license certification and Cal/OSHA registration;
- The contractor notifies the SCAQMD in writing at least ten days prior to beginning any work involving asbestos;
- The contractor follows the SCAQMD requirements on how to analyze, handle, remove, label, store and dispose of any asbestos-containing materials; and
- All supervisors and workers involved in asbestos removal have had EPA-approved training courses in handling asbestos.
- All construction, rehabilitation or remodeling taking place within the City of Burbank is subject to approval and licensing from the City Building and Safety Division.

Household Hazardous Waste

Household hazardous waste (HHW) is any discarded material that may threaten human health or the environment if disposed of improperly. Since 1989, the City of Burbank's program for collecting hazardous wastes used in the home has operated in conjunction with the Los Angeles County Household Hazardous Wastes Collection Program. This program includes numerous collection events that are held at various locations throughout the county and are open to all county residents. The City

of Burbank has had a waste oil recycling program since 1983. The Burbank Recycle Center has a state-of-the-art waste oil collection center built with a grant from the California Integrated Waste Management Board. The waste oil center also includes areas to recycle anti-freeze and oil filters. In addition, a load-checking program, in which trash trucks are stop checked for hazardous materials, has been in place at the Burbank landfill since 1988. These programs are supported by an ongoing public education program which includes the Burbank Recycle Center's clearinghouse of information. This information service helps citizens keep hazardous waste out of the ground water and the landfill and find substitutes for hazardous materials.

Hazardous Materials Incident Response

The BFD is responsible for responding to all hazardous materials incidents in the City. The BFD has personnel trained as hazardous materials technicians assigned to fire stations throughout the City as well as a special HazMat Unit (HazMat 14) located at Station 14 (2305 West Burbank Boulevard). Information regarding the commercial and industrial businesses in the City , including site plans, existing inventory and location of hazardous materials at the site, and hazardous materials plans, is kept at HazMat 14. Hazardous material technicians are trained to respond to hazardous materials incidents with methods of containment and stabilization. Hazardous materials clean-up is performed under private contract and the cost borne by the property owner.

The Burbank HazMat Unit vehicle is equipped to be used to assist or manage hazardous material incidents. This unit shares staffing with an engine company at Fire Station 14. The HazMat Unit has the capabilities to:

- Control flammable and combustible spills and fires;
- Identify chemicals using analytical equipment, and test samples of unknown chemicals to determine specific properties, degree of toxicity, type of hazard, etc.;
- Use fully-encapsulated chemical suits with self-contained breathing apparatus to enter the hazardous zone;
- Decontaminate exposed personnel, equipment, apparatus and clothing;
- Use combustible gas indicators for determining the presence of explosive vapor gas clouds; and
- Contain spills by utilizing plugs, patches, diking materials, absorbents and other specialized equipment for the control of hazardous materials.

The HazMat Vehicle has an on-board computerized database with the location and properties of hazardous materials stored in the City.

Verdugo Dispatch in Glendale coordinates the response to all calls for hazardous materials assistance in the Cities of Burbank, Glendale and Pasadena. Burbank and Glendale each have their own hazardous materials units. It is standard practice to request the assistance of the City of Glendale's HazMat Unit on any working hazardous materials incident. This assures complete containment of the incident and an adequate level of staffing. The increased level of staffing heightens the level of safety for fire personnel if a unique containment problem should arise.

The Hazardous Materials Response Team will assist the Fire Department Incident Command throughout any emergency until the product is no longer a threat to life, health and/or the environment. Once the incident has been mitigated, it is up to the responsible party to clean the spill or assure that a

qualified licensed contractor clean the spill and properly dispose of the hazardous product. Prior to the BFD's having a fully-staffed HazMat Unit, small acid and fuel spills took several hours to abate. Now, these same incidents can be handled in significantly less time.

The Los Angeles County Fire Department has three Hazardous Response Vehicles which are available upon request to any city in the county.

Hazardous Materials Incident Mitigation

There are numerous federal and state mandates, as well as local codes, that relate to the control of hazardous substances. Among such mandates is the State Hazardous Materials Release Response Plans and Inventory Program, otherwise known as Chapter 6.95 of the California Health and Safety Code. Burbank has adopted into the City's Municipal Code Chapter 6.95 of the Health and Safety Code dealing with the control of hazardous materials. Under this adoption the City Council has designated the BFD as the administering agency for these programs. In addition to the state-mandated programs, the BFD is responsible for enforcing Article 80 of the Uniform Fire Code, which deals with hazardous materials.

The City of Burbank operates several programs designed to reduce the potential of a hazardous materials accident occurring in the City and, in the event one does occur, to reduce its impact and damage. The City operates a Hazardous Materials Inventory Disclosure Program and a Risk Management and Prevention Program (RMPP). The Hazardous Materials Inventory Disclosure Program is identifies the quantity and type and storage location of hazardous materials in the community. The Risk Management and Prevention Program (RMPP) is intended to manage risk by preventing spills and releases of extremely dangerous materials or at least minimizing the adverse impact such a release may create.

Under the Hazardous Materials Disclosure Ordinance (BMC Section 15-1-8001.3.3) every business in the City of Burbank is required to submit a complete hazardous materials inventory disclosure report on an approved form to the BFD. If the business handles specific quantities of hazardous materials, it may be required to develop and implement a business emergency response plan. If the business handles acutely hazardous materials (AHM) above a specified quantity, then the BFD may require the business to complete an RMPP.

The RMPP includes several elements. The main supporting technical documents include a Hazard and Operability Study, a Seismic Assessment, and an Off-Site Consequence Analysis. The seven basic elements contained in a RMPP including the recommended corrective actions are to be based upon these supporting technical documents. The business has up to 12 months to complete the development of the RMPP and another 12 months to implement the recommendations of the RMPP once it has been approved by the BFD. Extensions may be granted by the BFD if necessary.

Recent amendments by the California legislature will change the way administrating agencies do business. Senate Bill 1082 sponsored by Senator Calderon calls for the consolidation of six hazardous materials regulatory programs by January of 1996. The county is responsible for coordinating the consolidation effort which involves numerous local government departments, the county and state agencies. The programs being consolidated include the following:

- Hazardous Waste Generator Programs, including tiered permitting inspections.
- Above Ground Tank Programs Spill Control and Countermeasure Plan.
- Underground Storage Tank Program.

- Release Response Plans, Inventories, Business and Area Plans also known as Disclosure Programs.

- Acutely Hazardous Materials/Risk Management and Prevention Programs.

Uniform Fire Code, Article 8001.3.2, Hazardous Materials Inventory Statement (HMIS) and Hazardous Materials Management Plan (HMMP) requirements and Burbank Municipal Code 15-1-8001.3.3.

In addition to this consolidation effort, amendments to the Federal Clean Air Act, call for implementation of an Accidental Release Prevention Risk Management Program (Fed-RMP) that is similar to the RMPP. This federal program delegates the responsibility for enforcement to the states. The states are likely to turn responsibility over to the local government. The federal government may permit agencies implementing the RMPP in California to be designated to administer the Federal RMP. If this comes about, the BFD would be burdened with another regulatory program to administer.

Hazardous Materials Policies

The overriding goal of the City is TO REDUCE THE THREATS TO THE PUBLIC HEALTH AND SAFETY FROM HAZARDOUS MATERIALS. The following policies are intended to implement this goal.

P1. Review proposed developments involving the use or storage of hazardous materials, and disapprove proposals which cannot properly mitigate unacceptable threats to public health and safety to the satisfaction of responsible agencies.

P2. Encourage businesses and organizations which store and use hazardous materials to improve planning and management of their on-site hazardous materials management procedures.

P3. Promote efforts to reduce or eliminate the use of hazardous materials through dissemination of information and creation of incentives and disincentives.

P4. Maintain a hazardous materials response capability that will adequately handle Burbank's hazardous materials safety needs.

P5. Effectively coordinate all hazardous materials regulations with appropriate agencies.

P6. Provide the residents of Burbank with information on the proper storage and disposal of hazardous materials and encourage the use of City disposal facilities and services.

P7. Maintain City land use patterns which separate residential areas from commercial and industrial areas which allow the storage and use of hazardous materials.

P8. Include information on soil contamination and storage of hazardous materials in the City's Geographical Information System (GIS); this information would be made available to the public and would be used when reviewing development proposals.

Aviation Disaster

Aviation Disaster was rated as a HIGH PRIORITY HAZARD by the City of Burbank.

On January 13, 2005, the Executive Director and Director of Public Safety for the Bob Hop Airport met with the City of Burbank Fire Chief and Emergency Services Coordinator to discuss the airport's role in the Hazard Mitigation Planning Process. As well as providing vital data used in preparing the Aviation Disaster and Transportation Loss parts of the City of Burbank All Hazard Mitigation Plan, two hazard mitigation strategies were discussed and subsequently added to the plan.

The Bob Hope Airport is the source of most air traffic in the City of Burbank. The airport is located in the northwestern corner of the City. The airport has been in operation since 1930, both as a private venture and as a public transportation facility. Lockheed bought the airport in 1940 and operated it until 1978 when the Burbank, Glendale, Pasadena Airport Authority (later renamed the Bob Hope Airport Authority)—a joint powers authority—bought the facility. The Airport Authority runs the airport and maintains a contract with Airport Group International, Inc., to provide daily operations and maintenance. The Bob Hope Airport serves commercial airlines, as well as military aviation and general aviation needs. The following table shows the proportionate use of the airport facility by each type of aviation.

AIRCRAFT OPERATIONS 1995 AND 1996				
	AIR CARRIER	**GENERAL AVIATION & AIR TAXI**	**MILITARY**	**TOTAL**
1995	34.3%	65.5%	0.2%	100%
1996	32.0%	67.8%	0.2%	100%
PERCENT OF CHANGE	-2.3%	+2.3%	0	

In 1996 approximately 4.8 million passengers utilized the airport facility. It is forecasted that passengers served by the airport could more than double over the next 15 years with a forecasted 10 million passengers using the Burbank facility annually by the year 2010. There was an average of 85.5 commercial flights departing Burbank daily in 1996; this number is forecasted to reach 143 departures daily in the year 2010.

As of 1996 there have not been any catastrophic aircraft emergencies in Burbank or involving the Airport. There is, however, always the potential for an aircraft disaster, and this potential increases with the increasing number of flights entering and leaving from Burbank each year. An "aircraft emergency" is defined as any crash, accident, fire or other disaster involving aircraft or any potential mishap for which stand-by equipment has been alerted by the Burbank Air Traffic Control Tower. An airport disaster has the potential of affecting almost any area of the City of Burbank because virtually all the populated areas of the City are within the perimeter of building height limitations imposed by Part 77 of the Federal Aviation Regulations, as well as areas identified in the City's Airport Approach Map (Burbank Municipal Code Sec. 31-1305).

There is no way to predict the time, place or size of an aircraft emergency, but several possible scenarios have been identified for planning purposes. These scenarios include accidents within the confines of the airport, accidents within the Burbank City limits, accidents occurring partially within the

City and partially in a neighboring jurisdiction, accidents involving military aircraft with or without explosives and accidents involving radioactive or other hazardous materials; scenarios are in place for both ground accidents and mid-air collisions.

One of the more likely scenarios for an airport related disaster involves a commercial aircraft such as the Boeing 737, which is a widely used type of aircraft at the Bob Hope Airport. This aircraft is used for short and medium distance routes and has a seating capacity of 145. The Boeing 737 has a wing span of approximately 95 feet and an overall length of approximately 110 feet; its total fuel capacity if 5,360 gallons.

If this type of aircraft were to crash in the developed urban area, it would affect many properties due to the speed and elevation at time of descent and the fuel load of the aircraft. The severity of the disaster depends to a large extent on the land use at the site of the crash--a high density residential area would result in more damage and danger to residents than, for example, a warehouse or industrial use. If a Boeing 737 were to crash in a medium density multiple family area, the area of the crash would be smaller than if the crash occurred in a lower density single family neighborhood because in the higher density areas the height and mass of the apartment buildings would slow the aircraft and absorb the impact. However, there would be more fatalities and injuries as well as more property damage than in a lower density area.

A worst case scenario would involve the largest aircraft used in Burbank, Airbus A310 or Boeing 757. Though accounting for only a small percentage of the airport operations, a mid-air collision or explosion involving this extremely large aircraft poses a worst case scenario for disaster planners. Currently these aircraft are only used by cargo operators which would result in limited loss of life to passengers, however, an increased probability for a hazardous materials incident.

There are numerous secondary hazards that could result from an airport-related disaster; these hazards include fires, hazardous materials incidents, traffic disruption and loss of utilities.

The Bob Hope Airport has an FAA approved Airport Emergency Plan (AEP). This plan sets forth emergency plans that insure prompt response to all emergencies and other unusual conditions in order to minimize the possibility and extent of personal injury and property damage on and around the airport. The plan, approved and administered by the Director of Airport Services, is reviewed and coordinated with all agencies providing emergency services, tenants and all others having responsibilities under the plan. The AEP deals in detail with responses to the following emergencies.

- Aircraft emergencies such as crash, accidents, fire or other casualty involving and aircraft
- Bomb aboard an aircraft
- Bomb threat at the airport
- Airport structure fires
- Explosive and radioactive materials--the handling and recovery of such materials
- Aircraft hijacking
- Civil disturbance
- Natural disasters such as earthquakes, floods and high winds
- Lighting failure

It is recognized that all emergency situations cannot be anticipated; if an emergency situation arises that is not covered by the plan, the Executive Director or his/her designated representative has the authority to modify the plan, except as such modifications may not contravene FAA regulations. Copies of the AEP have been distributed to and coordinated with the FAA, airport tower, firefighting and rescue agencies, including the Airport Fire Department, law enforcement, hospital emergency dispatch and principal airport tenants.

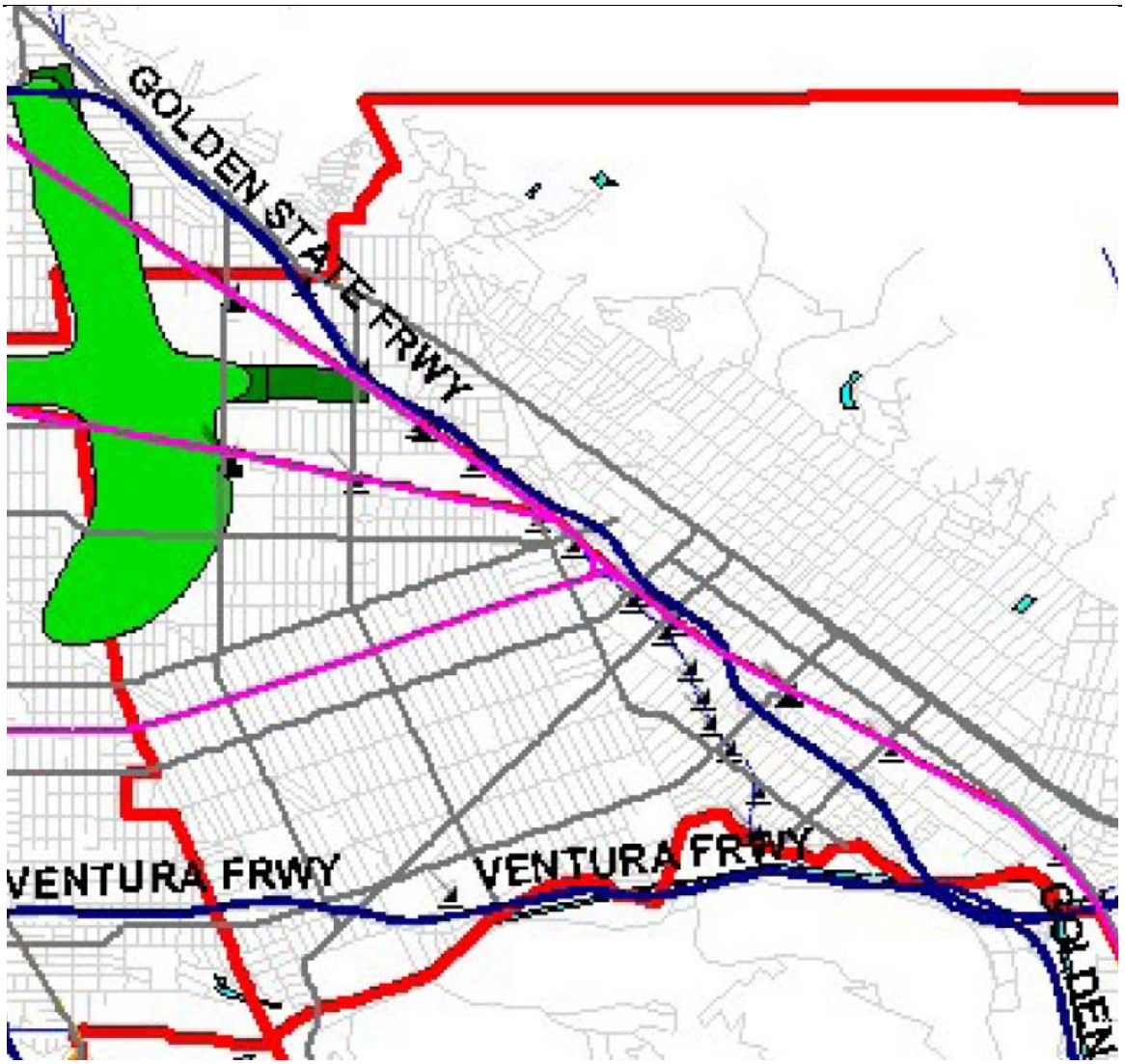
Airport Disaster Response

A major air crash that occurs in a heavily populated residential area can result in considerable loss of life and property. Even though an event like this may be classified an incident rather than a disaster, the logistics required for response and recovery may be astronomical. 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 Coroner's 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 green in the map above shows the Bob Hop Airport Major Planning Zone Area for Low Level Approaches.

Specific Situation

The City of Burbank is located in the central portion of Los Angeles County. The City is comprised of residential, business and open space areas. The City contains major freeway systems such as the Interstate 5 and State Route 134.

The skies above Burbank are heavily occupied by aircraft originating and departing from a number of airports located nearby. The airports 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.

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

LOCAL AIR TRAFFIC--In addition to these airport facilities a number of local facilities experience a significant amount of helicopter traffic on a regular basis. These include:

1) Burbank Fire Department Camp #2

2) Verdugo Hills Hospital

3) The NASA Jet Propulsion Laboratory

4) Search and Rescue aircraft flying into and out of the Angeles National Forest.

Aircraft flying over Burbank 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.

The Burbank Fire Department (BFD) has ultimate liability and responsibility for all disaster response in Burbank, but it is the Airport Fire Department which responds first to emergencies at the airport; the Airport Fire Department has primary responsibility for all aircraft emergencies occurring on the airport property. When the BFD arrives on the scene of the disaster, the Airport Fire Department hands over command of the incident to the BFD but continues to play an active operational role throughout. Although it is accurate to state that the Incident Commander retains control of the aircraft incident, it is imperative that all responding agencies understand that the overall control of airport operations, except those associated with the emergency incident in progress, remains with the airport management and operations staff.

The Bob Hope Airport has its own crash/fire/rescue services on site. The BGP Airport Authority has contracted with an independent company to provide these services. In addition to responding to all airport emergencies, the Airport Fire Department continually inspects all buildings, sprinklers and hydrants at the airport. The Airport Fire Department exceeds the FAA requirement for emergency personnel and equipment stationed on site at the airport; this allows the airport to help out with certain local disasters when needed. The airport fire and police are on the "Disaster Net" system, which is one of Burbank's Emergency Operations Center radio frequencies. After emergencies at the airport are taken care of and under control, the airport makes available fire department manpower and equipment to help in City-wide disaster response.

During the Northridge Earthquake in 1994, service at the airport was uninterrupted. The airport has its own emergency generators for airfield lighting, control tower and terminal building operations; barring damage to these generators in the event of an earthquake or fire, they can keep the airport functioning, even when City power is out. The airport has its own manpower to assess and respond to airport damage—it does not draw on City manpower in times of crisis and doesn't need to wait for City manpower to be available. As evidenced in the 1994 earthquake, the airport can be a major community resource in times of disaster, receiving emergency airlifts, receiving incoming National Guard forces and serving as a staging area for troops during times of civil unrest.

The Airport Fire Department works closely with the Burbank Fire Department. The interface between the airport and BFD takes place through the Verdugo Dispatch, which is a joint dispatch center located in Glendale for handling all fire-related emergency calls in Burbank, Glendale and Pasadena.

Several entities are involved in all potential and actual airport related emergencies, these are: Airport Fire Department, Airport Police, Burbank Fire Department, Airport FAA Tower and Airport Operations, Burbank Public Works, Burbank Water & Power, and the California Highway Patrol (just to name a few). These entities work together to prepare for incoming emergencies when there is forewarning as well as in responding to an unexpected emergency.

Detailed emergency procedures for responding to an aircraft accident in Burbank can be found in the City's Multi-Hazard Disaster Plan.

Airport Hazard Mitigation

Mitigation measures for airport related disasters fall into two categories: those designed to prevent airport related disaster and those aimed at creating a response system to minimize loss of life and property.

While the risk of aircraft-related disasters occurring in and around the airport cannot be completely eliminated, the City and Airport Authority can take measures to reduce that risk. Maintaining compliance with federal, state and local regulations and procedures helps ensure that the latest relevant safety standards are enforced at the airport. Such regulations include land use regulations designed to ensure that appropriate land uses, densities and building heights are located in the airport approach area and clear zones. Various measures to bring the airport into better compliance with FAA regulations that set a minimum distance between runways and passenger terminals are currently under consideration. The risk of aircraft-related disasters can also be reduced through ongoing careful maintenance of all airport facilities and aircraft leaving the Bob Hope Airport.

In the event of an airport-related disaster, the effectiveness of the response can be the determining factor in mitigating loss of life and property. It is important, therefore, that there be effective communication and coordination between all responsible entities. This can be accomplished through ongoing interdepartmental training both at the airport and between the airport and the BFD. The City of Burbank Disaster Council Training program is one way of achieving this important communication and coordination

Airport Safety Policies

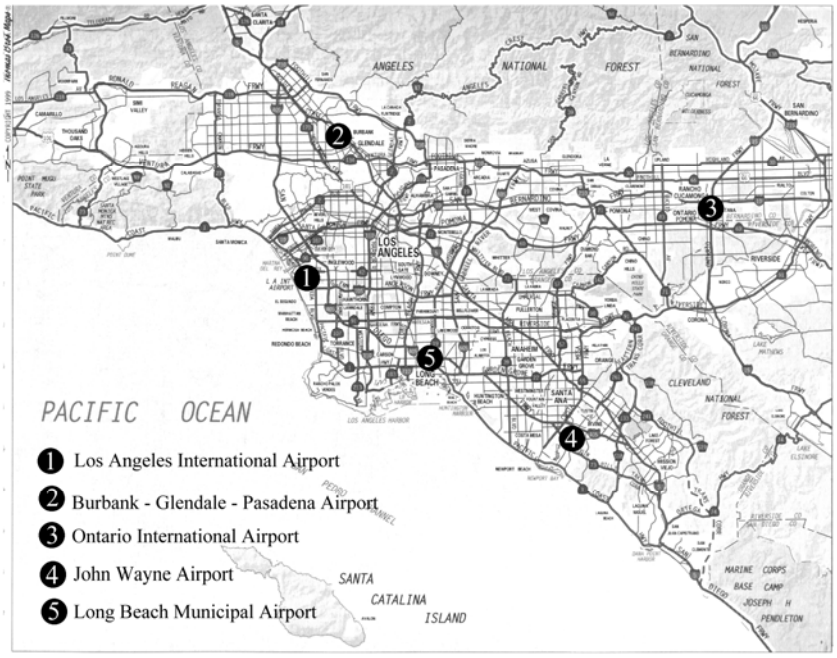
The overriding goal of this Safety Element regarding safety at the Bob Hope Airport is TO REDUCE THE THREAT TO PUBLIC SAFETY AND PROTECT LIVES AND PROPERTY FROM LOSS AS THE RESULT OF AN AIRPORT RELATED DISASTER. The following policies are intended to further this goal.

P1. Carry out and enforce proper land use planning around the Bob Hope Airport to ensure land uses, densities and building heights compatible with the airport safety needs.

P2. Comply with federal, state and local regulations and procedures which are designed to ensure the safe operation of the Bob Hope Airport and the safe location of airport facilities.

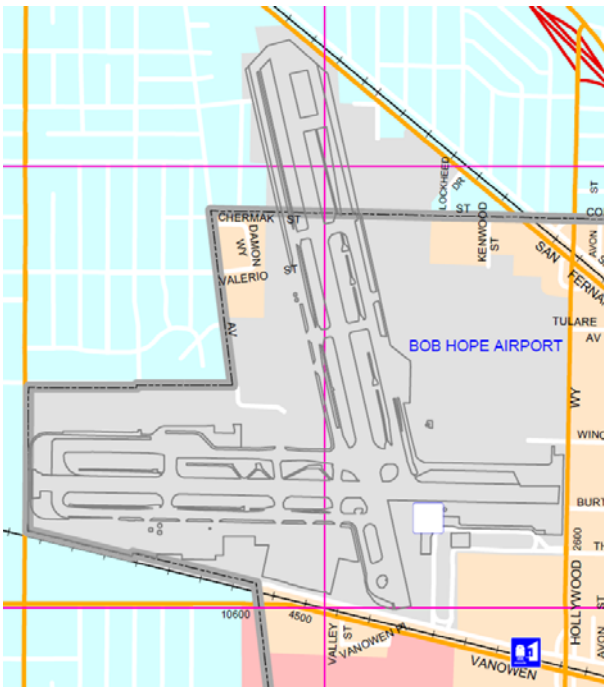
P3. Continually review and update when necessary the City procedures for responding to airport and aircraft-related emergencies.

P4. Encourage and facilitate the continued coordination between the BFD and the Airport Fire



Department in planning disaster response in the case of an airport-related disaster.

Map of Airport Locations



Moderate Risk Priority Hazards

Severe Weather/Destructive Winds

Severe Weather/Destructive Winds were rated a MODERATE PRIORITY HAZARD by the City of Burbank.

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, historic significant Santa Ana wind events have been destructive and have negatively impacted 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.

The map on the preceding page 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 Niňo Weather Phenomenon

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 Francis o, San Joaquin, San Luis Obispo, San Mateo, Santa Ba5bara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Sutter, Tehema, 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.

Impact on the City of Burbank

Intense rain, or rain that lasts for several days, is the most common cause of floods and mudslides. Ideally, rain waters should be absorbed back into the earth. When there is more rain than can be absorbed by the earth, run-off is created; when run-off is excessive, flooding occurs. The rapid development of Burbank and the San Fernando Valley has placed an impervious cap of asphalt and structures over most of the orange groves and open fields that once absorbed much of the rainfall. As

a result, the amount of run-off water which must be carried by streets, storm drains and flood control channels has increased substantially.

Burbank lies at the heart of the basin known as the Los Angeles County Drainage Area (LACDA), which consists of 1,460 square miles and over eight million people. Two main rivers, the Los Angeles and the San Gabriel, carry the water from this basin to the Pacific Ocean.

From the 1930s through the 1960s, the U.S. Army Corps of Engineers and the Los Angeles County Department of Public Works built the largest metropolitan flood control system in the nation, consisting of dams, channels and storm drains. Over the years, this system has collected flood waters, contained them in flood control channels and passed them out to the Pacific Ocean. As development in the metropolitan area continues, however, this system is increasingly becoming insufficient to handle the amount of run-off that used to be absorbed back into the ground. Since the early 1980s it has become evident that the existing flood control system is in need of significant upgrading in order to meet today's needs. The U.S. Army Corps of Engineers, in conjunction with the Los Angeles County Department of Public Works (LACDPW), has completed the Los Angeles County Drainage Area (LACDA) Study which identified several areas within the Los Angeles River incapable of conveying runoff from a 100-year storm. Flooding would be limited to just outside the channel confines along the City of Burbank's southernmost boundary line which parallels the Los Angeles River. LACDPW is further analyzing the limited flooding potential in this area prior to making final recommendations. Currently, construction of the LACDA Project is underway along the lower Los Angeles River and certain tributaries to increase the level of flood protection in these areas.

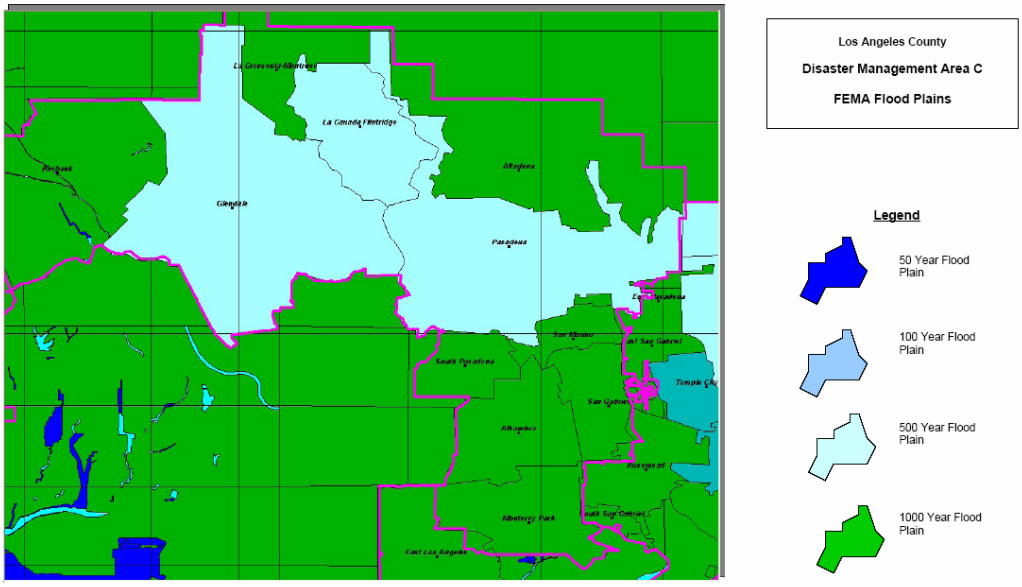
Analysts and disaster planners describe floods of different sizes in terms of their statistically projected frequency: for example, 10-year, 50-year, 100-year and 500-year. A 10-year flood has a 10 percent chance of happening every year, a 50-year flood has a two percent chance and a 100-year flood has a one percent chance of occurring in any year. The map assigns zones based on the depth of anticipated flooding to the areas indicated as having a risk of flooding. The risk of large floods in any year is relatively small.

The LACDA flood control system does not have the capacity to prevent flooding from a 100-year flood which would cover about 100 square miles; serious flooding could result in some areas from storms above a 50-year size. A 100-year flood could affect many areas close to the Los Angeles River in the San Fernando Valley and downtown Los Angeles, including Burbank. A larger, though statistically less likely, 500-year flood would affect an even greater area of the LACDA.. Estimating the area subject to flooding from different size storms is not an exact science. Where water might break out of a channel depends on several factors, including where debris builds up to restrict or block further flow. Even once water breaks out of a channel it is difficult to predict where it will go with the accumulation of debris diverting the flow. Flood maps, then, are estimates based on the best data and analytical techniques available.

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program, which makes insurance available to individuals in communities with a flood hazard if the communities participate in the Federal Flood Insurance Program; Burbank is a participant in this program. FEMA has prepared flood insurance rate maps for the Los Angeles basin which identify areas lying within the 100-year and 500-year flood plains. The problems of flooding are different in the different topographic areas of Burbank. In the flat-land areas of Burbank, flooding occurs in streets, intersections and under underpasses. This occurs when the amount of run-off exceeds the capacity of the storm drains and when water accumulates in low lying areas.

The intersection of Burbank Boulevard, Victory Boulevard and Victory Place—known as Five Points—is commonly an area of flooding during times of heavy precipitation. This is due to the fact that the Lockheed Storm Drain, which runs adjacent this area, is unable to accommodate the run-off in this area

from heavy rains. The Lockheed channel is only 12-feet wide and has the capacity to handle no more than a 10-year flood. During periods of exceptionally heavy rainfall, this storm drain and surrounding drains fill to capacity and flood residential neighborhoods and adjacent commercial properties. Other areas of the City which are especially susceptible to flooding include properties adjacent the Lockheed Storm Drain, the Burbank Channel and the Los Angeles River; Buena Vista Street in the flat-lands; Griffith Park Drive between Chandler Boulevard and Olive Avenue; Virginia Avenue between Olive Avenue and Oak Street; Oak Street between Virginia Avenue and Glenwood Place; the intersection of Lake Street and Chestnut Street; Empire Avenue in the vicinity of the airport; Lincoln Avenue near the I-5 Freeway; and the properties on Oak Street and Glenwood Place south of the City boundary. Not all of the above cited flood-prone areas appear on FEMA's Flood Insurance Rate Map.



In the hillsides, the problems are somewhat different, with heavy rainfall creating the potential for mudslides and torrents of rain washing out of the hills into the hillside residential areas. The threat of mudslides is especially great in years in which the hillside vegetation has been destroyed as a result of brushfire. Hillside vegetation serves to stabilize the soil and enables the soil to absorb more rainfall. Hillside grading and construction also create the potential for mudslides and erosion during periods of heavy or prolonged rainfall.

The major factors which contribute to hillside flooding and mudslides are brushfire burnout or inadequate ground cover, street configuration, drainage patterns and insufficient or blocked drainage basins.

Another area of the City which could be adversely affected by heavy rainfall and flooding is the City's Water Reclamation Plant. During heavy or prolonged rainfall, large quantities of water seep into the sewers through manholes and illegal drainage systems and can overload the treatment capacity of the wastewater treatment plant. If there is more sewage than can be treated it becomes necessary to either divert the excess sewage to the Los Angeles North Outfall or to dump untreated sewage into the Burbank Western Flood Control Channel adjacent the treatment facility. In times of heavy rainfall the Burbank Western Flood Control Channel is very full with rushing water; this makes even the normal discharge of treated effluent into the channel difficult. In the event that untreated sewage must be released into the channel, the effect is less serious than during emergency releases during dryer times because the raw sewage is heavily diluted by the high rain waters.

High winds which often accompany storms have the potential to create serious problems in the City. Strong winds can result in power outages caused by fallen trees or the effects of the wind on the electrical wires. Overhead electrical lines are designed to de-energize automatically if electrical flow is interrupted; if this automatic safeguard malfunctions, there is the likelihood of fire resulting from downed power lines. Falling trees can damage structures and vehicles and can inflict serious harm on people. Windblown objects are also a hazard of high winds. Roofing has been known to blow off and windows blow out as the result of strong winds. This can be very dangerous to pedestrians in the area.

In addition to the threat of flooding from rain, there is also a potential threat to the community of flooding as a result of dam failure; this type of flooding would, however, be a more localized flooding as compared to the citywide impact of flood level rains. Seismic activity would be the most likely cause of dam failure in Burbank. Burbank Reservoirs Nos. 1, 4 and 5 are classified as "dams" by the California Department of Water Resources because they have storage capacities in excess of 50 acre-feet of water.

Explosions

Explosion was rated a MODERATE PRIORITY HAZARD by the City of Burbank.

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 air blast and into the soil (ground) as ground shock, both as radially expanding shock waves.

To be explosive, the material

1. Must contain a substance or mixture of substances that remains unchanged under ordinary conditions, but undergoes a fast chemical change upon stimulation.

2. 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.

3. 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

Economic Disruption

Economic Disruption was rated a MODERATE PRIORITY HAZARD by the City of Burbank.

Los Angeles County is the most populous county in the nation. With approximately 10 million residents, it is home to about 30 percent of the state's population. The county has grown by nearly 2 million residents in the past 20 years, including more new immigrants than any other region of the country except the New York City area. Today, the county's population is 45 percent Latino, 31 percent non-Latino white, 12 percent Asian, and 10 percent black—similar to the racial/ethnic profile that state demographers predict for California by 2040. The county is also home to large numbers of low-income residents. Reflecting the size and diversity of the county, local government is large and complex, as are the problems of delivering local services to residents. In recent years, local governments in Los Angeles County have confronted difficult issues such as providing health care for the uninsured, reducing air pollution, improving low-performing schools, coping with racial/ethnic tensions involving police actions, and coming to terms with local efforts to secede from the city of Los Angeles. There are also housing, transportation, land use, and environmental issues relating to population growth and development. These factors tend to contribute negatively, on a large scale, to any economic downturn or disruption in the community.

"…Los Angeles County's suburban areas, like Orange County, are becoming so densely settled that they could be said to be urbanizing. Financial and social elites are withdrawing from civic leadership. "People think that most countries and cities and societies are moving away from industrialization," he says. "The notion of a postindustrial society is just wrong."

For example, the rise and decline of manufacturing jobs in American cities has taken a surprising twist in Los Angeles. The Chicago model of urban development assumed a growing industrial base. But in the 1960's and 70's, the traditional assembly-line factories that employed so many urban workers succumbed to cheaper labor overseas.

In the 1980's, the Pentagon's military buildup buoyed L.A.'s aerospace and defense companies and insulated the region from the industrial decline. After the cold war ended, however, cutbacks in defense spending hit Southern California particularly hard and deepened the recession of the early 1990's…."

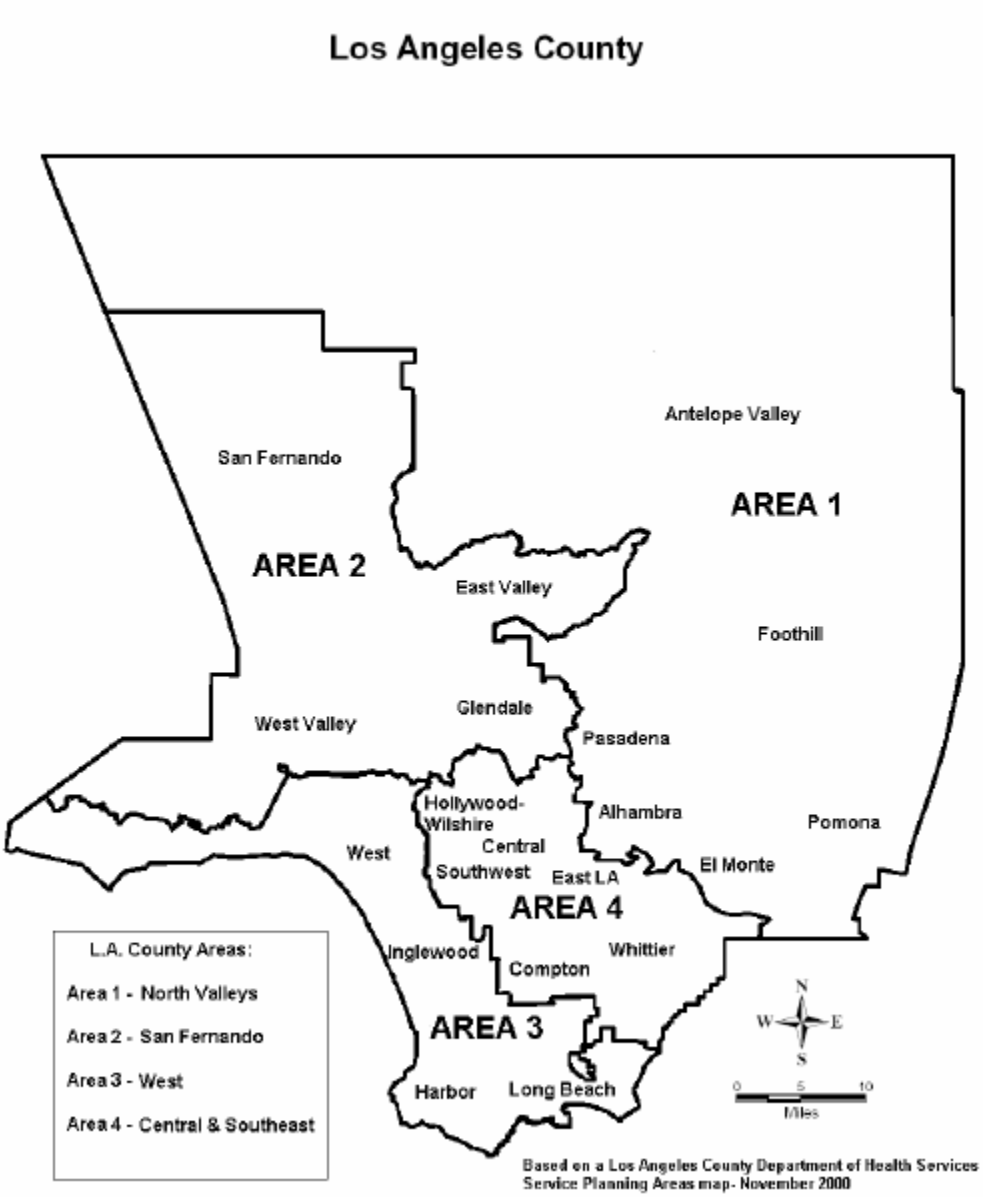
"The New Urban Studies"; Los Angeles scholars use their region and their ideas to end the dominance of the 'Chicago School'; By D.W. MILLER.

Recession

When asked to evaluate the LA County economy today, only 24 percent of residents rate it as excellent or good, while 48 percent say it is fair, and 27 percent poor. Half of county residents report that their area is in a mild (12%), moderate (25%), or serious (14%) recession, with Latinos (58%) and blacks (57%) more likely than whites (44%) to say their area is in recession. And far more residents today (67%) than just one year ago (52%) predict bad economic times for the state during the next 12 months. This economic angst is also taking its toll on residents' overall perception of the county:

- 40 percent of county residents say that the region is headed in the right direction, and 43 percent believe it is headed in the wrong direction, with whites, blacks, and San Fernando area residents more negative than others about the county's prospects.

- Residents are divided about whether the county will be a better or worse place to live in the future (32% each), with an equal percentage (31%) expecting little change.



Government Perceptions

Economic and social conditions — as well as the lingering effects of recent secession efforts — are also affecting attitudes about local government. Seventy-one percent of residents say that the county government is fair (49%) or poor (22%) at solving problems, while only 24 percent rate it as excellent or good. San Fernando area residents (28%) are more likely than others to view county government in a

negative light. While more residents (39%) say their city governments are excellent or good at solving problems, a majority (54%) still gives them low ratings. Residents of LA City are far more critical than others. Given their disenchantment with government, LA residents are open to a number of proposals for reform.

Given the vast differences in attitudes among racial and ethnic groups in LA County, it is not surprising that many residents are concerned about the state of race relations in the region. A majority of residents (53%) believes race relations are not so good (39%) or poor (14%) in the county today. Blacks (65%) are more negative than Latinos (58%), whites (50%), or Asians (45%).

Percent seeing the issue as a big problem in their part of Los Angeles County	All Adults	County Area			
		North Valleys	San Fernando	West	Central / Southeast
Traffic congestion on freeways and major roads	67%	64%	69%	70%	63%
Availability of housing that you can afford	54	47	52	57	59
Crime	41	32	36	38	55
Lack of opportunities for well-paying jobs	40	37	35	36	49
Population growth and development	38	34	43	37	37
Air pollution	37	30	34	32	47

Overall Outlook

Los Angeles County residents are in a sour mood when it comes to the state of the economy in California, the county, and their local areas. Two in three county residents predict bad economic times for California during the next 12 months. This is a considerably higher percentage than we found in PPIC Statewide Surveys in 2000, 2001, and 2002. These pessimistic views are shared across geographic, racial/ethnic, demographic, and political groups.

"Turning to economic conditions in California, do you think that during the next 12 months we will have good times financially or bad times?

	Los Angeles County Adults			
	Feb 00	Jan 01	Feb 02	Mar 03
Good times	77%	50%	38%	25%
Bad times	16	39	52	67
Don't know	7	11	10	8

When asked to evaluate the Los Angeles County economy today, only 24 percent of residents rate it as excellent or good—48 percent say it is fair, and 27 percent rate it as poor. The low ratings are consistent across geographic areas and demographic groups.

As for their parts of Los Angeles County, half of county residents report their areas are now in a mild (12%), moderate (25%) or serious (14%) recession. The Central/Southeast area has the highest percentage of residents (58%) who say their part of the county is in a recession. Higher percentages of Latinos (58%) and blacks (57%) than whites (44%) say their areas are in a recession. Residents with lower incomes and less education and immigrants are also more likely than others to share this view.

Residents are divided about their overall outlook for the county: Forty percent say that Los Angeles County is headed in the right direction, and 43 percent believe that it is headed in the wrong direction. As for the future, 32 percent think the county will be a better place to live than it is today, 32 percent think it will be a worse place to live, and 31 percent think it will be about the same as now. Whites, blacks, and San Fernando area residents are more negative than others about the county's overall outlook.

Concerning quality of life, 61 percent of Los Angeles County residents say things are going well, and 36 percent say they are not. More than one-third of residents in all four areas believe things are going badly. Although 51 percent see themselves living in the same neighborhood five years from now, 22 percent expect to be living elsewhere in the county, and 17 percent expect to be living outside the county. Younger and more educated residents are most likely to say they will move out of the county in the next five years.

"Do you think that things in Los Angeles County are generally going in the right direction or the wrong direction?

		County Area			
	All Adults	North Valleys	San Fernando	West	Central / Southeast
Right direction	40%	41%	37%	42%	41%
Wrong direction	43	40	49	42	42
Don't know	17	19	14	16	17

State Budget Deficit and Local Tax Increases

Only 3 percent of county residents identify the state budget deficit as the most important issue facing Los Angeles County. Nevertheless, 92 percent of county residents say they are very concerned (71%) or somewhat concerned (21%) that the state budget deficit will cause severe cuts in areas such as city and county government and local schools. This concern is shared across the county's major areas and racial/ethnic groups. Women tend to be more concerned than men that the deficit will cause severe cuts in local services: 77% are very concerned, compared to 64% of men. Majorities in all partisan groups are concerned about potential cuts. However, Democrats (78%) are more likely than independents (68%) and Republicans (66%) to be very concerned.

Los Angeles County residents are willing to raise certain new taxes to fund some local services in light of the large state budget deficit. For example, 64 percent of county residents favor new taxes on alcoholic beverages and cigarettes in order to fund county-level public health and medical emergency services. However, there are large partisan differences: 69 percent of Democrats, 60 percent of independents, and 52 percent of Republicans support new alcohol and cigarette taxes. Women (69%) are much more likely than men (60%) and those under age 35 (68%) are more likely than those ages 55 and older (57%), to favor these so-called "sin taxes." Some six in 10 residents in each of the four geographic areas would support this tax increase to fund county-level services.

Public Policy Institute of California; Special Survey of Los Angeles in collaboration with the University of Southern California; Mark Baldassare, Research Director & Survey Director

Floods

Flood was rated a Moderate Risk Priority Hazard by the City of Burbank.

The City's Emergency Operations Center (EOC) is periodically activated because of flooding. In this event, the Public Works Department is the department designated as disaster manager. It is the Field Services Division of the Public Works Department that plays the key role in directing all flood control activities. After a flood it is the Public Works Department that fills pot holes in the streets, repairs sidewalks undermined by the flood waters, clears debris Citywide, cleans out the City-owned debris basins, and removes debris and sandbags.

Burbank's Police Department is responsible for traffic control around cordoned off flooded areas and has primary responsibility for evacuation of residents. The Police Department assists the BFD and other agencies in the rescue of flood victims, as well as assisting the Field Services Division of the Public Works Department in managing flood-related incidents. The Police Department is responsible for evacuation. Due to the fact that some hillside streets act as drainage channels for the hillside area, the Police Department enforces parking restrictions in the hillside area during major storms to prevent vehicles from being washed down the street as has happened in earlier years.

The BFD is prepared to respond to all types of flood situations including flooded structures, street and intersection flooding, hillside flooding and mudslides. Individual engine and truck companies routinely carry equipment which is needed in the majority of storm-related calls; there are, however, certain situations in which specialized training and equipment is needed, such as swift water rescue. In the event of a flood control channel rescue, when there is a high volume of water accompanied by a swift current, the BFD immediately deploys its own swift water rescue personnel and receives assistance from neighboring jurisdictions through mutual aid agreements. The BFD is responsible for conducting search and rescue for mudslide victims.

The City's Multi-Hazard Disaster Plan details response actions and responsibilities for responding to a flood or mudslide emergency.

Flood Hazard Mitigation

The Public Works Department is responsible for the distribution of sandbags to residents of Burbank to mitigate the effects of flooding. In the fall, hillside residents receive pamphlets instructing them on how to use sandbags to divert water and mud flow. In years where there have been hillside brush fires, the Public Works Department plans for the anticipated rain season. The department consults with planning experts at the Los Angeles Flood Control District and requests the calculation of the amount of debris that can be expected to move from the hillside. The calculations are based on affected acreage and the slope. The Los Angeles Flood Control District plots anticipated mud flows on maps and charts the approximate yardage of hillside that is expected to move. From this data, the City can plan for residential evacuation contingencies and schedule the maintenance of debris basins.

Hillside grading and construction increase the potential for mudslides. This hazard can be mitigated by requiring engineering geologic and soils reports prior to subdivision approval and/or the issuance of a grading permit. These reports are intended to identify and characterize the hazard, assess the risks posed by the proposed development and grading practices, and identify mitigation measures that reduce any such risks to an acceptable level. Following grading and construction, the City requires that hillsides be replanted with fire resistant vegetation, and provided with sprinklers to maintain the new vegetation.

Flood Safety Policies

The overriding goal of Burbank's flood control planning and programs is to MINIMIZE INJURY, LOSS OF LIFE AND PROPERTY, AND ECONOMIC AND SOCIAL DISRUPTION CAUSED BY FLOOD AND INUNDATION. The following policies are intended to achieve this goal.

P1. Inform developers requesting development permits--especially for critical facilities--within the designated 100-year flood plain, of potential risks and require construction and hazard mitigation per the UBC and Burbank Municipal Code.

P2. Inform property owners requesting development permits in the designated high-risk inundation areas of the potential risks and provide recommendations for hazard mitigation where possible.

P3. Continue to participate in the Federal Flood Insurance Program to ensure that flood insurance will be available to individuals in the community.

P4. Continue to maintain and upgrade where necessary those components of Burbank's flood control system that are under the City's jurisdiction, in order to ensure that the system is capable of protecting existing and planned development in the City from the increasing amounts of run-off that result from continued urbanization.

P5. Encourage and facilitate the upgrading of the county flood control systems to increase the capacity of the system.

P6. Enforce regulations which prohibit the draining of rainwater into the sewer system.

P7. Promote flood and storm danger awareness through public education.

Civil Unrest

Civil Unrest was rated a Moderate Priority Risk Hazard by the City of Burbank.

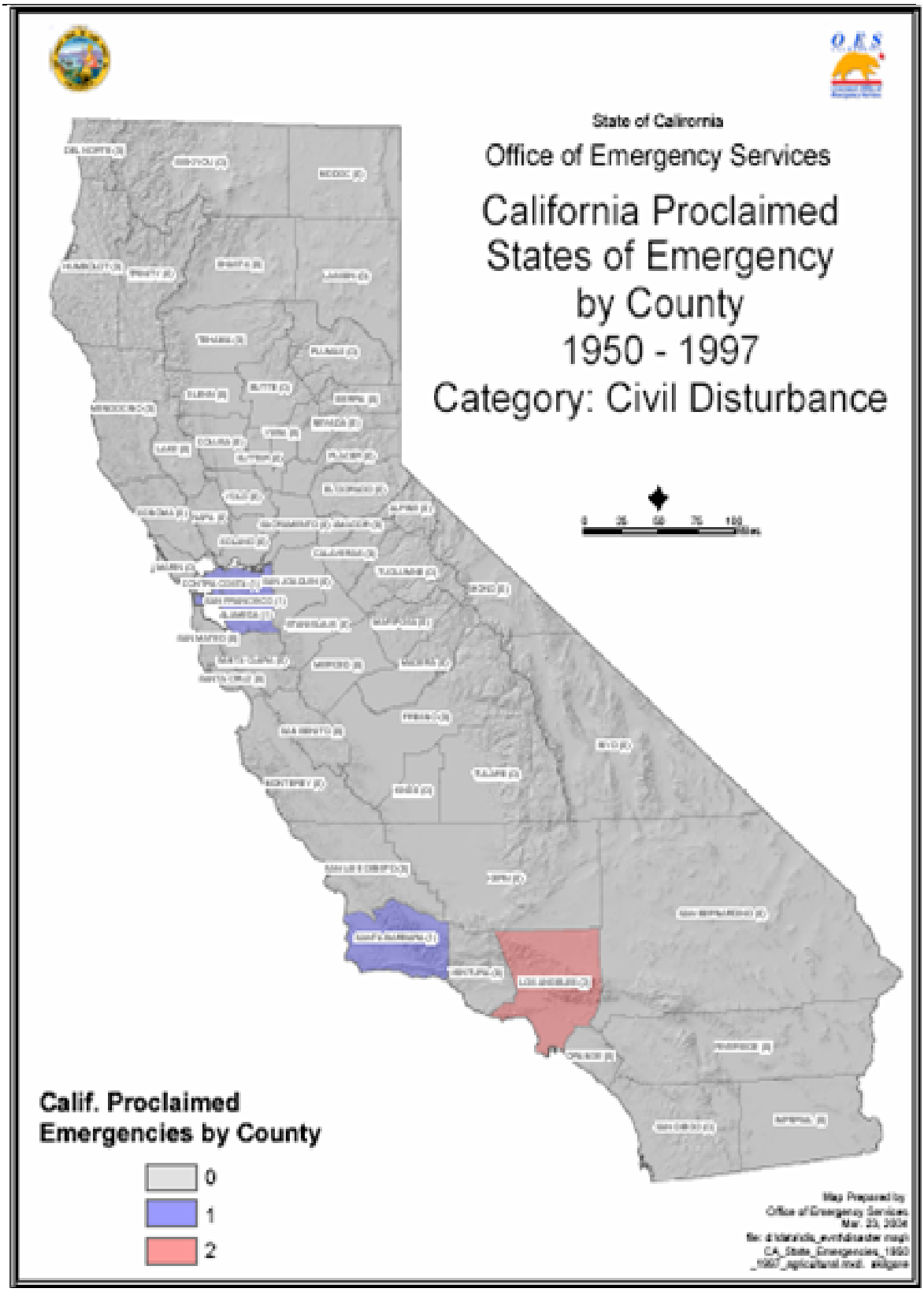
The potential for a Civil Unrest originating in Burbank is considered very unlikely; however, the potential for a civil unrest in Los Angeles County that could negatively impact the Burbank area is more likely. Burbank cannot impact the risk beyond its borders and can only support the County's and adjacent jurisdictions' efforts to defuse and respond to a potential civil unrest emergency. Burbank is not isolated from Civil Unrest as it, and nearby Glendale, Pasadena and Los Angeles, are homes to Hispanic Gangs. Gang activity and influences are considered to be root-causes for many civil disturbances that evolve into widespread rioting and civil unrest. Gang-related territorial disputes and violence erode at the stability of communities and neighborhoods and can ultimately boil over into the hearts of cities.

There are over 600 Latino gangs in Los Angeles County representing over 50% of the gang membership in the area and they are more geographically distributed throughout the region than Black, Asian and White gangs. They are found in great numbers in the San Fernando Valley, San Gabriel Valley, beach communities, Long Beach, Compton and South Central Los Angeles.

Below is a list of cities within Los Angeles County where Hispanic gangs are active.

Alhambra	Antelope Valley	Artesia
Atwater	Azusa	Baldwin Park
Bell	Bell Gardens	Bellflower
Burbank	Carson	City of Commerce
City of Industry	Claremont	Compton
Covina	Cudahy	Culver City
Downey	Duarte	El Monte
El Sereno	Gardena	**Glendale**
Hacienda Heights	Hawaiian Gardens	Hawthorne
Huntington Park	Inglewood	Irwindale
La Mirada	La Puente	Lakewood
Lancaster	Lawndale	Lomita
Long Beach	Los Angeles County	**Los Angeles**
Lynwood	Maywood	Monrovia
Montebello	Monterey Park	Newhall
Norwalk	Paramount	**Pasadena**
Pico Rivera	Pomona	Redondo Beach
Rosemead	San Dimas	San Fernando
Santa Clarita	Santa Fe Springs	Santa Monica
South Gate	Temple	Torrance
Walnut	West Covina	West Whittier
Whittier		

Source Los Angeles County Sheriff's Department


State of California
Office of Emergency Services
California Proclaimed States of Emergency by County 1950 - 1997
Category: Civil Disturbance
Calif. Proclaimed Emergencies by County
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2

History of Civil Unrest in Los Angeles County

Los Angeles Chinese Massacre

October 24, 2001 represent(ed) the 130th Anniversary of the infamous Chinese Massacre, which resulted in the murder of 19 Chinese men and boys in the first Los Angeles Chinatown. Some ten percent of the town's population of 5,000 participated in what might have been the City's first race riot, one that would regrettably be followed by others. Historically, this event was one of the worst occurrences of anti-Chinese violence in the United States during an era of virulent discrimination against the Chinese.

The incident was triggered by an internal dispute in the community between two Chinese men arguing over a Chinese girl, which led to the accidental slaying of a Caucasian man caught in the crossfire. The social conflagration that followed was fueled by the growing movement of anti-Chinese discrimination in California, which would climax in the passage of the Chinese Exclusion Act in 1882. At the base of the unrest was the uncertain and unstable economy in the West following the Civil War, leading to high unemployment, especially among veterans. This historical development led to a growing resentment of a growing group of industrious immigrants, many deliberately imported to build the transcontinental railroad, who undertook, at a minimal wage, jobs and tasks too menial, harsh, or difficult for settlers and citizens to care to take. Originally, the Chinese newcomers were welcomed. Then, this willing work force of differing cultures and religions was perceived by the body politic to be usurping jobs and resources intended for those deemed more worthy. The all-too-familiar attitude of growing resentment and discrimination set the stage for a day and a half eruption of rampant looting and burning, in a town already known for its lawlessness.

In defense of a great majority of good citizens, descendants of eyewitnesses are today bringing to light many stories about the protection of Chinese families by their forefathers-from neighborhood vendors to family servants. Others acted out of a sense of righteousness and of fair play.

This 1871 nadir of Chinese American history in Southern California also casts a light on the resilience and resourcefulness of immigrants as well as their earnest perseverance and optimism in quest of that better life that America can offer:

After the Massacre, few Chinese of Los Angeles left;

Chinese continued to operate their laundries in the City, with the industry peaking in the 1880's and yielding to the French, Italians and other Southern Europeans;

Chinese continued as farm hands and ranch hands, comprising over 50% of the work force at one time, helping to build the great Southern California citrus industry

Within five years, Chinese became the principal truck gardeners and vegetable vendors of Los Angeles, controlling over 90% of the industry for the next 25 years, later transitioning to Italian-, Japanese-, and Mexican-American growers and wholesalers;

Within 15 years, Chinese units were participating in the festive parades of Los Angeles

The growing integration of the Chinese into the region's economy was followed by a gradual acculturation, which fostered the development of settlement and family life: first in Old Chinatown, at today's El Pueblo de Los Angeles Historical Monument and Union Station, and later in the Chinese American neighborhoods of Southern California. Much of this progress took place under heavy pressure of discrimination, during a period of political and social isolation. But this evolution, with its increasing interdependence among all communities, took place nonetheless, demonstrating the major

role Chinese Americans have played in establishing the rich diversity and proud heritage of Southern California.

Today's descendants of these Chinese American pioneers find themselves in all types of professions and businesses, in every neighborhood, at all social strata, and in all economic levels. Chinese Americans are now scientists and athletes, CEOs and teachers, artists and policemen, actors and producers, to name a few varied careers. Many have served America in its wars and other external conflicts, a proudly fulfilled responsibility of citizenship long denied the Chinese immigrant and once so difficult to achieve. In many households, the semi-annual ritual of voting in all government elections for officials and on questions of public policy is still viewed as a sacred duty, a verification of the privilege of citizenship. In many ways, the hopes of these first pioneers in achieving the American dream have been fulfilled by their posterity.

Looking back at the achievements, against all odds, of those Chinese immigrants who endured 1871, we proclaim that American history tells us that immigrants have always been valuable in developing and building our Southern California community and our American civilization. We further declare that immigrants will always bring new talents, and boundless energy, and that they will succeed even when given less-than-an-even-chance because they believe in America and the possible access to its opportunities. We observe that they and their descendants do acculturate in time, and moreover, they serve to shape the unique diversity of America.

On this 130th Anniversary, we further proclaim that the 1871 lesson of the Chinese Massacre holds truths for us today: that immigrants have proven to be a most valuable and important segment of our society. And because their influx insures a continued healthy, prosperous America, the process of immigration should and must continue. The opportunities America offers should never be closed to anyone residing in this country seeking to better themselves and their families.

The occurrence of the riot of 1871 was indeed a major hate crime in American history. It manifested the worst in human behavior and racial intolerance during an era of strong anti-Chinese sentiments. On the other hand, those who moved to aid and protect Chinese people during the occurrence, and the subsequent steady but measurable progress of the community's leadership toward healing and harmony over the years that have since followed were among the most noble of decent human reactions.

One can hardly avoid noticing the positive lessons from 1871 that also help us to cope with the recent tragedies of September 11, 2001. The combined events of that day now rank as the worst hate crimes ever perpetrated on American soil. Application of the moral principles, fundamental American ideals, and ready compassion that marked the collective reaction to both incidents, 130 years apart, were once again an affirmation of our American character. We realize that tolerance of others, compassionate understanding of their ways, customs, and beliefs, and the continual goal of community harmony are essential for furthering the progress and growth of our communities. Commitment to the practice of these ideas is a profound demonstration of the truth, vitality, and success of our American way of life.

Munson Kwok, Ph.D.
Board Member
Friends of the Chinese American Museum

Zoot Suit Riot (1943)

Citizens of early 1940s Los Angeles lived in an atmosphere of tension that ultimately exploded in the Zoot Suit Riots. But what caused the unrest?

Census information tells part of the story. In the decades leading up to the rioting, Los Angeles experienced an unprecedented population explosion. Along with Midwesterners who flocked to Los Angeles, thousands of Mexican refugees fleeing the Mexican Revolution made their way there. So too did landless white laborers escaping the Dust Bowl of the drought-plagued Southern Plains, and African Americans seeking more opportunity than they'd found in the South.

The coming of war in 1941 further complicated the city's social dynamics. White men went off to fight in a segregated military, and women and people of color filled the jobs in the defense industry previously reserved for white males. Rather than embrace such events as social advances, many whites accepted the changing social realities only as the lesser of two evils -- the greater being German and Japanese militarism. While wartime conditions reconfigured gender and racial boundaries, segregation was emphatically reinforced in other areas. Civilian and military leaders in Los Angeles all too easily saw cultural and racial difference among Japanese Americans as subversion and betrayal, and actively supported the forced relocation of Japanese Americans into camps set up in the rural West.

Many Angelenos saw themselves on the frontline of the battle with Japan and felt vulnerable to a West Coast attack. Civilian patrols were established throughout the city and Los Angeles beaches were fortified with anti-aircraft guns. Southern California also served as a key military location with bases located in and between San Diego and Los Angeles. Consequently, up to 50,000 servicemen could be found in L.A. on any given weekend.

Independent of these social tensions, young people were growing fascinated with jazz. It was a musical, cultural, and even ideological expression that was far removed from the Hit Parade music commonly played on mainstream radio. Jazz music and dance were sensual, expressive, joyous, and raucous. Jazz musicians openly defied segregation by mixing on and off the stage, and jazz enthusiasts also mixed on and off the dance floor.

The zoot suit was one part of the jazz world that visually defied the norms of segregation. Unwritten rules demanded that people of color remain unseen and unheard in public spaces, but the zoot suit, with broad shoulders, narrow waist, and ballooned pants, was loud and bold. Zoot-suited young men (and some young women) held themselves upright and walked with a confident swagger that seemed to flow from the very fashion itself. As the Sleepy Lagoon murder trial of 1942, involving mostly Mexican American young men, proved, this particular demographic, zoot-suited or not, came to be singled out and associated with criminality and gangsterism by Los Angeles authorities. In a time of war, when social boundaries were rapidly changing, questions of allegiance and conformity became invested with particular significance. Many Angelenos objected to the zoot suiters -- including, incidentally, older generations of Mexican Americans, whose communities were traditional, conservative, and self-contained. Critics saw Mexican American youths as cultural rebels and delinquents who openly defied cherished American values and customs.

Tensions between servicemen and civilians were on the rise as thousands of military men on leave poured into Los Angeles, seeing the city as a playground for booze, women, and fights. While many civilians tolerated them because of the war effort, others did not. Particularly in the segregated, ethnic enclaves of Los Angeles, unruly servicemen met stiff opposition from young men and women who refused to defer to the presumed prerogatives of white privilege. While white military men and civilian youth of all colors clashed in the streets, confrontations occurred most frequently between white servicemen and Mexican Americans, because they were the largest minority group in Los Angeles.

Drunken military men on their way back to base after a night of carousing were often "rolled" by civilian minority youth hoping to teach them proper respect. With equal animosity the sailors would often insult Mexican Americans as they traveled through their neighborhood. In the barrios, rumors spread about sailors searching out Mexican American girls. On the military bases, stories circulated about the violent reprisals suffered by sailors who dared to date Mexican American females. Sailors complained bitterly about their wives or girlfriends being subjected to the sexual taunts of young Mexican Americans. The tension continued to escalate until a street fight between sailors and Mexican American boys sparked more than a week of fighting in June of 1943 known as the Zoot Suit Riots.

On the evening of Monday, May 30, 1943 about a dozen sailors and soldiers were walking on a downtown street. After spotting a group of young Mexican American women on the opposite side of the street, the sailors and soldiers changed direction and headed their way. Between the military men and the young women stood a group of young men in zoot suits. As the two groups passed each other, Sailor Joe Dacy Coleman, fearing he was about to be attacked, grabbed the arm of one of the zoot-suited young men. Coleman's move proved to be a big mistake. Coleman was almost immediately struck on the head from behind and fell to the ground, unconscious. Other young civilians pounced on the sailors with rocks, bottles and fists. After the ferocious attack, the sailors managed to escape and carry Coleman to the safety of the Naval Armory. "The fracas lasted little more than a few minutes, but the shock reverberated for days," wrote historian Eduardo Pagán, "The details of the fight grew larger and more distorted in each re-telling of the story." It wasn't long before sailors organized a retaliatory strike against zoot-suiters.

About fifty sailors left the Armory on the night of Thursday, June 3, armed with makeshift weapons. The attack on Seaman Coleman was still fresh in their minds and rumors of new attacks were swirling through the base. Their first stop was the nearby neighborhood of Alpine Street -- scene of many previous confrontations. Unable to find any zoot-suiters at Alpine, they proceeded toward downtown and stopped at the Carmen Theater. After turning on the house lights, the sailors roamed the aisles looking for zoot-suiters. The first victims of the zoot suit riots -- 12 and 13-year-old boys -- were guilty of little more than being in the wrong place at the wrong time. Ignoring the protests of the patrons, the sailors tore the suits off their bodies and beat and clubbed the boys. The remains of their suits were then set ablaze.

As the mob of sailors moved on, reports began to reach the Armory's watch commander. Executive Officer Lieutenant Charles Bacon was sent to investigate. After failing to find any evidence of wrongdoing at numerous spots, Bacon came upon the Shore Patrol marching a group of sixty men to the Central Police Station, where they were to be placed in jail. Bacon assumed control of the situation and saw to it that no charges were recorded by the Shore Patrol.

As the second night of rioting began, Mexican American young men drove back and forth in front of the Armory, hurling epithets at the guards. Later that night sailors once again headed out in search of trouble. When the sailors could not find enough zoot-suiters, they decided to take the fight into the Mexican American neighborhoods of East Los Angeles and Boyle Heights. It was a new twist on the violence: instead of focusing their attacks in areas where sailors and civilian youth had clashed, the sailors moved into the Mexican American neighborhoods. Thus their retaliatory strike became an assault on the Mexican American community itself. The sailors cruised the barrio, storming into bars, cafes and theaters.

Los Angeles police were unwilling to step in and protect civilians. One policeman was quoted after the riots as saying: "You can say that the cops had a 'hands-off' policy during the riots. Well, we represented public opinion. Many of us were in the First World War, and we're not going to pick on kids in the service."

The violence continued during subsequent nights, enveloping even those who had no connection to jazz or the zoot suit. When a group of Mexican musicians exited the Aztec Recording Company after a recording session, they too were attacked. The musicians were all adults, and none of them wore a zoot suit. Military commander Clarence Flogg reported that there were "hundreds of servicemen prowling downtown Los Angeles mostly on foot -- disorderly -- apparently on the prowl for Mexicans." The Navy reported that "Groups vary in size from 10 - 150 men and scatter immediately when Shore Patrol approaches. Men found carrying hammock cues [clubs], belts, knives and tire irons..."

Although groups of armed servicemen roamed the streets attacking civilians, the military seemed more concerned with regaining control over their men than with the violence they were committing. Leery of the negative press that would result from mass arrests, Admiral Bagley, the commanding officer, appealed to his sailors' "common sense."

Mexican American kids organized and fought back. Rudy Leyvas and his friends set traps for the sailors and civilians who were pursuing them, using decoys to lure their attackers in to a trap. "And they let out a cry: There they are! There they are! And they came in. As they came in, once they got all the way in, we all came out Š I, myself, had a bat. And I used it."

The worst violence occurred on Monday, June 7. One Los Angeles paper printed a guide on how to "de-zoot" a zoot suiter: "Grab a zooter. Take off his pants and frock coat and tear them up or burn them." That night a crowd of 5,000 civilians gathered downtown. By this time the mob was no longer made up of only sailors from the Armory. Soldiers, Marines, and sailors from other installations as far away as Las Vegas eagerly joined in the assaults. Part of the mob headed south for the predominately African American section of Watts and another group headed east for Mexican American East Los Angeles.

Al Waxman, editor of the *Eastside Journal*, a small Jewish newspaper, witnessed the chaos. He describes a "mass of humanity locked in violent struggle, arms swinging, legs kicking, shrieking with anger." The police were arresting dozens of young Mexican Americans. "Why am I being arrested?" one of them asked. The response was a savage clubbing with a nightstick. Although the boy fell to the sidewalk unconscious, he was kicked in the face by police.

By Tuesday morning the rioting was finally under a measure of control. Senior military officials declared Los Angeles off limits to all sailors, soldiers and Marines. The Shore Patrol gave orders to arrest disorderly personnel. The following day the city council adopted a resolution that banned the wearing of zoot suits on Los Angeles streets, punishable by a thirty-day jail term.

As the riots subsided, the governor ordered the creation of a citizens' committee. Its charge was to investigate and determine the cause of the riots. In 1943 the committee issued its report; it determined racism to be a central cause of the riots. At the same time, Mayor Fletcher Bowron came to his own conclusion. The riots, he said, were caused by juvenile delinquents and by white Southerners. Racial prejudice was not a factor.

PBS Online

Watts Riot (1965)

The **Watts Riot** began on August 11, 1965 in Los Angeles, California when the Los Angeles Police pulled over Marquette Frye, whom they suspected of driving drunk. While police questioned Frye and his brother, a group of people began to gather around the scene. A struggle ensued shortly after Frye's mother Rena arrived on the scene, resulting in the arrest of all three family members. Police used their batons to subdue Frye and his brother, angering the growing crowd. Shortly after police left, tensions boiled over and the rioting began. What followed was six days of rioting that claimed the lives of 34 people, injured 1,100 and caused estimated $100 million dollars damage.

One of the few structures in Watts that remained untouched by the damage was the Watts Towers, a group of tall steel sculptures constructed by Italian immigrant Sam Rodia (often erroneously called Simon Rodia).

Rodney King Riot (1992)

On April 29, 1992, following the not guilty verdicts of four Los Angeles Police Officers accused of beating motorist Rodney King, violence erupted at the intersection of Florence and Normandie in South Los Angeles. At the same time, individuals at the corner of 67th Street and 11th Avenue were revolting against passer-bys and motorists. Black residents were outraged that four LAPD officers received not guilty verdicts from an all white jury in Simi Valley, despite the videotape evidence of the beating of Rodney King, and the testimonial by veteran police officers on behalf of the prosecution. From April 29, 1992 at approximately 3:30 p.m. until May 1st, the violence raged on. The National Guard were called in to bring calm to the city, and by Friday afternoon the violence and looting were subdued. The most violent urban revolt that the United States had ever experienced in the twentieth century resulted in 52 deaths, 2,499 injuries, 6,559 arrests, 1,120 building damaged, 2,314 stores damaged and close to 1 billion in damages.

If we go back to 1992 and examine the precipitating factor of the riot, economics actually played a small role influencing the revolt. Yes, there was a recession in Los Angeles and around the country, unemployment was at an all time high, high levels of poverty probably exacerbated the riots that took place, but the critical events and underlying factors to the revolt were the beating of Rodney King in 1991, the probation sentence handed down on Sun Ja Doo, a Korean store clerk that shot Latasha Harlins, a 15 year old black girl, in the back of the head after a dispute over orange juice, and the acquittal of the four LAPD officers. In the Sun Ja Doo incident the jury came back with a second-degree murder conviction, but Judge Joyce Karlin, a white woman, did the unheard of when she sentenced Doo to five years probation. This is what I believe paved the way for the worst urban riot in contemporary history and the fact that over 50% of the damaged or destroyed property was Korean owned was no accident, and is the reason why many characterize this event as an uprising or a revolt. Although many of the images captured certainly show those acting as opportunists taking advantage of an unfortunate situation, at the same time there was an organized attack against Korean establishments within South LA and outside of the black community along Vermont and Western Avenues, north of the black community. Relations between blacks and Koreans in Los Angeles have often been full of tension and there is housing evidence that suggests that those tensions are still present in 2002.

The critical factors that influenced the events of April 29, 1992 all took place within the criminal justice sector of society with the police department central to the events. This is where he must look to address the question of a potential third Los Angeles riot. Chief Daryl Gates was held accountable for the type of relationship that was created between the police and minority communities in South LA and his response to the first day of the riot was considered dismal. Also let us not forget history, when in 1965 people took to the streets of Los Angeles in protest the day following alleged police abuses after the arrest of a Marquette Frye on 116th Street and Avalon. Chief William Parker was also highly criticized

for the sharp divide that was created between the black community and the militaristic police, and resentment towards the police grew worse every year since Parker took over as Chief in 1950 up until the violence erupted in 1965. One indication of the increasing tension between the police and the community was the number of complaints that blacks filed between 1950 and 1965. Parker claimed no responsibility during a commission and when asked what sparked the riot he replied "someone threw a rock, and like monkeys in a zoo, they all started throwing rocks."

All of the seven race riots of 1964 were also sparked by an incident of police misconduct. The Otto Kerner Commission of 1968 stated that police actions led to outbreaks in half of the cases studied and those that believe that another revolt will take place will need to examine law enforcement and the criminal justice system. If the LAPD of LASD engage in any inappropriate activity such as excessive force or unlawful officer involved shootings, an outbreak of violence is definitely possible. Let us not forget what happened in Cincinnati in April 2001 when the shooting death of Timothy Thomas, 19, whose death touched off three days of riots. Cincinnati police officer Steven Roach was later found not guilty of negligent homicide in the shooting, but these are the types of events that will determine if Los Angeles will see part three. Under Bernard Parks inappropriate activity from the rank and file was highly unlikely with the disciplinary system that he had in place, but the actions of the next police chief may determine if what happened in 1965 and 1992 will occur again.

Alejandro A. Alonso, Los Angeles Riots 10 Years Later and the Likelyhood of Another Revolt, April 29, 2002 (et sec)

Chronology of the 1992 Los Angeles Riots		
29 April	1515	Acquittal verdicts announced in the trial of police officers accused of beating Rodney King.
	1850	Rioters beat and nearly kill truck driver Reginald Denny as a television crew captures both the horror of the incident and the absence of Los Angeles Police Department (LAPD) officers. Hundreds of arson and looting incidents begin.
	2100	The California governor's office informs the adjutant general that the governor has decided to mobilize (call to state active duty) 2000 California National Guard (CANG) troops at the request of the LA mayor.
30 April	-	A dusk-to-dawn curfew is imposed in large portions of the city of LA and the surrounding county.
	0400	Approximately 2000 CANG soldiers have reported to armories.
	1100	Los Angeles County requests 2000 more CANG personnel; the governor approves the request.
	1350	Ammunition from Camp Roberts (in central California) arrives in LA area via CH-47 helicopter.
	1435	The first CANG elements (two military police companies) deploy in support of the LAPD and the LA Sheriff's Department (LASD).
	2000	About 1000 CANG troops are currently deployed "on the street," with more than 1000 more prepared to deploy and awaiting mission requests from law enforcement agencies.
	2356	LAPD and LASD request 2000 additional CANG troops, for a total of 6000.
1 May	0100	Perceiving the CANG deployment to be too slow, the governor requests federal troops.
	0515	The President agrees to deploy 4000 federal troops to LA.
	0630	Approximately 1220 CANG soldiers are deployed in support of LAPD; 1600 are deployed in support of LASD; and 2700 are in reserve awaiting missions.
	1430	Active component Marines from Camp Pendleton, California, begin arriving in the LA area via convoy.
	1630	Commander, Joint Task Force-Los Angeles (JTF-LA) arrives in LA area.

Chronology of the 1992 Los Angeles Riots		
	1730	Active component soldiers from Ft. Ord, California, begin arriving in the LA area via C-141 aircraft.
	1800	The President announces that the CANG will be federalized.
2 May	0400	Final plane with active component soldiers arrives.
	1100	Approximately 6150 CANG troops are deployed on the street, with 1000 more in reserve; 1850 soldiers from the 7th Infantry Division are in staging areas; Marines prepare for deployment.
	1900	First active component troops deploy on the street; a battalion of Marines replaces 600 CANG soldiers.
	2359	More than 6900 CANG soldiers are deployed, with 2700 more in reserve. Approximately 600 Marines are deployed, but most active component Army and Marine Corps personnel remain in staging areas.
9 May	1200	CANG reverts to state status, ending federalization; active component forces begin redeploying home.
13-27 May	-	CANG releases troops from state active duty, returning them to "part-time" status.
Source: Compiled from Harrison (1992), Delk (1995), and various CANG after-action reports.		

Gangs in Los Angeles County

There are **88 incorporated cities** and dozens of other unincorporated places in Los Angeles County (LAC). In doing this research on the proliferation of gangs within Los Angeles, each of these places were visited in an attempt to not just identify gangs active in Los Angeles, but to determine their territories too.

Through several weeks of field work and research there were a total of 274 Black gangs in 17 cities and five unincorporated areas in Los Angeles County. In this research, both the cities and unincorporated areas are identified as "places," a term that the U.S. Census uses. Although none are located in the City of Burbank, there is a formidable presence in nearby Pasadena and the City of Los Angeles.

Locations of Blood Gangs in Los Angeles County

Athens | Carson | Compton | Duarte | Florence | Gardena | Hawthorne | Inglewood | Lakewood | Long Beach | Los Angeles | Lynwood | Paramount | Pasadena | Pomona | Rosewood | Santa Monica

Locations of Crip Gangs in Los Angeles County

Altadena | Athens | Carson | Compton | Duarte | Florence | Gardena | Hawthorne | Inglewood | Lakewood | Long Beach | Los Angeles | Lynwood | Paramount | Pasadena | Pomona | Rosewood | Santa Monica | Torrance | West Covina | Willowbrook

Alejandro A. Alonso, Los Angeles Riots 10 Years Later and the Likelyhood of Another Revolt, April 29, 2002 (et sec)

Low Risk Priority Hazards

Dam Failure

Dam Failure was rated a LOW PRIORITY HAZARD in the City of Burbank.

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

There is one dam which could have an impact on the City of Burbank in the event of a failure, this is the Devil's Gate Dam. This dam is located at the southern end of the Arroyo Seco north of the Rose Bowl facility in Pasadena and is totally outside the City of Burbank. A failure of this dam would have no direct effect on property in the City. The major effect of a failure would be an interruption of roads and highways on the south-east side of the city. This would include the 210 Freeway, Oak Grove Drive and Highland Drive. The impact of these closures would be significant with regard to transportation into and out of the area, but they would not pose a life/safety issue. Should this dam fail the second most significant issue for La Canada Flintridge is one of the depletion of emergency response resources which would most likely be allocated to respond to the down stream area of inundation.

Devil's Gate Dam is a flood control dam and as such is not filled with water a majority of the time. Failure of this dam during a catastrophic event, such as a severe earthquake, is considered a very unlikely event. Due to the method of construction of this dam, it should perform well in an earthquake; a failure is not expected to occur. However, for purposes of emergency preparedness, La Canada Flintridge should consider the factors of road and highway closures, the burden on emergency services and the need for support by neighboring agencies (Mutual Aid).

Emergency Response Actions

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

Special Events

Special Events were rated LOW PRIORITY HAZARDS by the City of Burbank.

Large crowds, gathered for special events, represent disaster hazards in the following ways:

- Viable targets for a terrorists
- Concentration of people in a relatively small, enclosed area during earthquakes
- Site for mass casualties in the event of an aviation disaster
- Challenge to egress in the event of a large fire elevating the risk of mass casualties

Depending on the event, could be prone to civil disobedience or riots

Major Studios

Castle Rock Entertainment, Beverly Hills
Warner Brothers Studios, Burbank
NBC Studios, Burbank
ABC Studios, Burbank
Dreamworks SKG, Universal City
Paramount Pictures
20th Century Fox, West LA
Walt Disney Pictures, Burbank - official
Movies.com - Buena Vista Pictures/Hollywood Pictures

Nearby Theme Parks

Six Flags Magic Mountain

Magic Mountain Pkwy, Interstate 5, Valencia

Universal Studios Hollywood

Hollywood Fwy. at Lankershim Bl,. Hollywood

Local Events

Because of the generally temperate and pleasant weather conditions, on any given day, it's possible to find a local special event that involves a gathering of people and/or some kind of venue. Local parks, community centers and theaters all harbor local celebrations.

Sinkholes

Sinkholes were rated LOW PRIORITY HAZARDS by the City of Burbank. There is no history of catastrophic sinkholes or subsidence in or near the City of Burbank.

Sinkholes

There are three types of sinkholes, each of which forms in a different way. Collapse sinkholes are by far the most hazardous because of how suddenly they can form.

1. SOLUTION SINKHOLES

Solution sinkholes form where soluble bedrock (i.e., limestone, dolomite, marble, or rock salt) is exposed at the land surface and therefore subject to dissolution by surface water. Runoff collects in natural depressions (often where bedrock fractures intersect) and slowly dissolves a sinkhole.

2. SUBSIDENCE SINKHOLES

Subsidence sinkholes are similar to solution sinkholes, except the soluble bedrock is covered by a thin layer of unconsolidated material (e.g., soil and/or sediment). Surface water infiltration dissolves cavities where the bedrock is most intensely fractured, and the overlying sediments gradually move downward into the expanding cavity.

3. COLLAPSE SINKHOLES

Collapse sinkholes form when surface materials suddenly sink into a subsurface cavity or cave. Cavities form slowly over time as groundwater moves along fractures in soluble bedrock and enlarge them through dissolution. Collapse can occur in two different ways (where caves are found). When a cavity gets sufficiently large, the "roof" becomes too thin to support its own weight and the weight of any overlying rock or sediment, so it collapses into the cavity.

Sometimes cavities are able to support the weight of overlying materials (usually sediments) by virtue of being completely filled with groundwater. If the groundwater level is lowered, then the overburden will first erode and then collapse into the dewatered cavity.

Hydro-compaction

Hydro-compaction is the subsidence of shallow soils and sediments as a result of adding water to the land surface. Typically this occurs in dry regions where agriculture relies on extensive irrigation) is notable not for the magnitude of the subsidence that occurs but for the fact that much of the western United States has the type of geologic conditions which are susceptible to this phenomenon.

The sediments that are susceptible to hydro-compaction were loosely deposited in an arid or semi-arid environment by processes that left them with a very high porosity (> 45%). As these sediments dry out, their high-porosity structure is preserved by clay particles that act as "bridges" to cement the larger particles together. If water is added, the clay "cement" loses its strength, and the sediment subsides under its own weight.

Volcanic Activity

Volcano was rated a LOW PRIORITY HAZARD by the City of Burbank.

A volcano is a mountain that is built up by an accumulation of lava, ash flows, and airborne ash and dust. When pressure from gases and the molten rock within the volcano becomes strong enough to cause an explosion, volcanic eruptions occur.

No active volcanoes are in Los Angeles County. No historical record of this hazard is available for the region.

"The molten rock (magma) that feeds volcanoes comes from much closer to the surface than the core, which is about 2,900 kilometers (about 1,750 miles) deep. Volcanoes are located where there is a source of magma. Lots of times this is at plate boundaries and that's also where there are lots of faults and earthquakes. The San Andreas Fault is a place where two plates are sliding PAST one another, so there are lots of faults and earthquakes. One of the main places where rock is melted is where one plate slides UNDER another. That happens further north in the Cascades of Washington, Oregon, and northern California and that's why they have some active volcanoes (like Mount St. Helens) there. Los Angeles and southern California may have a lot of potential for earthquakes, but are probably safe from volcanoes for a while."

Ronald R. Charpentier, Geologist, U.S. Geological Service

Drought

Drought was rated a LOW PRIORITY HAZARD by the City of Burbank.

Unlike meteorological weather forecasting, climatology deals with years. One 6 inch rainstorm out of nowhere could make these predictions for any 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

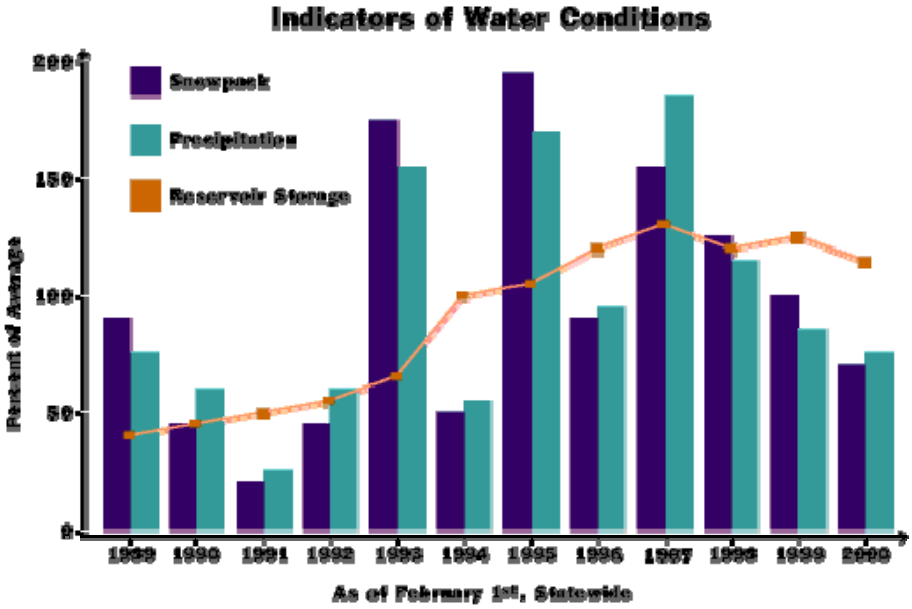
Drought is an insidious hazard of nature. Although it has scores of definitions, it originates from a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage for some activity, group, or environmental sector. Drought should be 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.



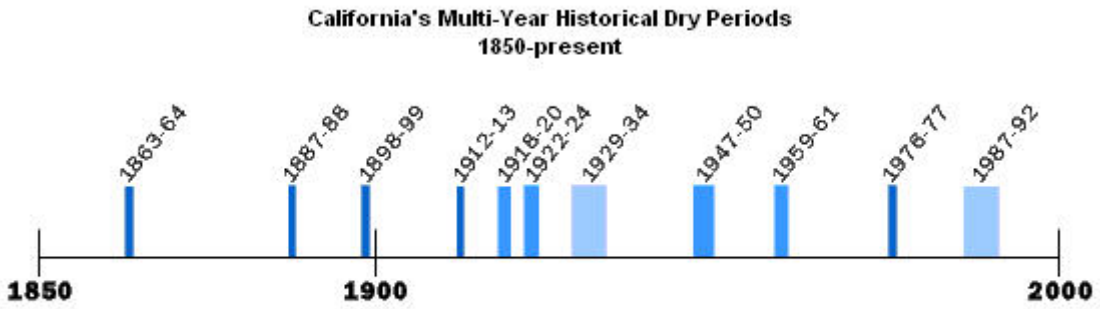
Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall -- ranchers engaged in dry land grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable

source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

Past California Droughts

Droughts exceeding three years are relatively rare in Northern California, the source of much of the State's developed water supply. The 1929-34 drought established the criteria commonly used in designing storage capacity and yield of large Northern California reservoirs. The table below compares the 1929-34 drought in the Sacramento and San Joaquin Valleys to the 1976-77 and 1987-92 droughts. The driest single year of California's measured hydrologic record was 1977. California's most recent multi-year drought was 1987-92.

Measured hydrologic data for droughts prior to 1900 are minimal. Multi-year dry periods in the second half of the 19th century can be qualitatively identified from the limited records available combined with historical accounts, as illustrated in the figure below, but the severity of the dry periods cannot be directly quantified.



1. Dry periods prior to 1900 estimated from limited data.
2. Covers dry periods of statewide or major regional extent.

Estimated Potential Losses for High & Moderate Natural Hazards

(In K for thousands, M for millions, B for Billions.)

Hazard	Estimated Daily Population at risk	Potential $ losses to Critical Facilities or Infrastructure	Potential $ losses to Commercial Buildings	Potential $ losses to Residential or Private Property	Potential Other $ losses (Environmental, Historical, Economic, Human)	Total Potential $ losses for this hazard
Totals	100,000 (local) 49,000 (commute)	465M	$2.25B	$11B	$3.5B	$17.215B
Earthquake*	29K	$88.4M	$427M	$2.09B	$665M	$3.27B
Wildland Fire**	12K	$9.3M	$11.8M	$42M	$40M	$103.1M
Severe Weather , Destructive Winds***	6.4K	$558K	$2.7M	$13.2M	$4.2M	$43.1M
Floods	1.5K	$465K	$2.2M	$11M	$3.5M	$17.2M
Volcanic Activity	Low Risk					
Drought	Low Risk					
Dam Failure	Low Risk					
Expansive Soils/Sink Holes	Low Risk					
Natural Hazards that do not pertain to Burbank	Avalanche, Coastal Erosion, Hailstorm, Hurricane, Land Subsidence, Landslide, Tornado, Tsunami					

* 19% estimate based on LA County HAZUS Studies
** 2% estimate based on past losses
*** .12% estimated based on past losses

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 and Prioritization 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. The City conducted a capabilities assessment, reviewing existing local plans, policies, and regulations for any other capabilities relevant to hazard mitigation planning. An analysis of its 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, the city evaluated and prioritized its 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 Burbank is supportive of the following hazard mitigation strategies. The City shall make every effort, given appropriate funding, to implement these strategies as conditions warrant.

Strategies & Recommendations

Strategy Synopsis Matrix

The matrix on the following pages shows the strategies on record for the City of Burbank and indicates the risks they address. "P" indicates the strategy's primary risk and "X" indicates related risks.

The table below defines the Hazard Abbreviations seen in the table:

Hazard Abbreviation	Hazard Addressed
AH	All Hazards
TA	Transportation Accident
EQ	Earthquake
WF	Wildland Urban Interface Fire
WT	Terrorism & Weapons of Mass Destruction
WW	Water/Waste Water
HM	Hazardous Materials
AD	Aviation Disaster
SW	Severe Weather
FL	Flood

Strategy Matrix

Strategy #	High Risk Hazards									Moderate Risk Hazards					Low Risk Hazards				
	Earthquake	Transportation Accident	Transportation Loss	Wildland Urban Interface Fire	WMD/Terrorism	Utility Loss	Water/Waste Water	Hazmat	Aviation Disaster	Severe Weather	Explosion	Economic Disruption	Flood	Civil Unrest	Dam Failure	Special Events	Sinkholes	Volcano	Drought
AH-1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Strategy #	High Risk Hazards									Moderate Risk Hazards					Low Risk Hazards				
	Earthquake	Transportation Accident	Transportation Loss	Wildland Urban Interface Fire	WMD/Terrorism	Utility Loss	Water/Waste Water	Hazmat	Aviation Disaster	Severe Weather	Explosion	Economic Disruption	Flood	Civil Unrest	Dam Failure	Special Events	Sinkholes	Volcano	Drought
AH-17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH-19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EQ-1	P																		
EQ-2	P	X						X					X						
EQ-3	P	X																	
EQ-4	P																		
EQ-5	P																		
EQ-6	P																		
EQ-7	P	X			X														
EQ-8	P				X														
EQ-9	P				X	X				X									
EQ-10	P	X		X	X			X	X	X	X		X		X				
TA-1		P						X											
TA-2		P						X											
WF-1				P						X									
WF-2				P															

Strategy #	High Risk Hazards									Moderate Risk Hazards					Low Risk Hazards				
	Earthquake	Transportation Accident	Transportation Loss	Wildland Urban Interface Fire	WMD/Terrorism	Utility Loss	Water/Waste Water	Hazmat	Aviation Disaster	Severe Weather	Explosion	Economic Disruption	Flood	Civil Unrest	Dam Failure	Special Events	Sinkholes	Volcano	Drought
WF-3				P						X									
WF-4				P															
WT-1					P														
WW-1						X	P												
HM-1	X	X		X	X			P	X	X	X		X		X				
HM-2					X			P											
AD-1	X				X	X			P	X	X								
AD-2	X	X	X	X	X	X	X	X	P	X	X	X	X	X	X	X	X	X	X
SW-1										P			X						
SW-2										P			X						
SW-3										P			X						
SW-4										P			X						
SW-5		X			X					P									
FL-1							X						P						

Strategies

All Hazards (AH)

AH-1 **Program/Project Description** **Priority 1 Strategy**	**GIS Enhancement** Using available data the GIS department would develop a risk identification layer and a projected damage or consequence layer of data. This would include • probable fire damage area • probable flood damage areas • probable earthquake damage areas • power system at risk areas • water system at risk areas
Estimated Cost	$150,000 in manpower for GIS work and risk analysis
Timeline/Schedule	1 to 5 years
Responsible Agency/Dept.	Information Technology would lead project but it would include each Department in the City to perform the probably damage risk analysis lead by the Fire Departments Emergency Management Division
Financing	Grant and general funds
Goal(s) Addressed	1. Address future mitigation project areas from analysis forecasting 2. Enhance Emergency response capability 3. Identify need for redundant communications and data transfer system 4. Enable enhanced public and private preparedness in high risk area
Related Hazard(s)	Earthquake Flood Wildland Urban Interface Fire Hazardous materials Utility Failures WMD Other hazards
Constraints	1. Some of the high risk areas may be on private property 2. Lack of funding 3. Lack of feasible data analysis tools

AH-2 **Program/Project Description** **Priority 1 Strategy**	**Redundant Emergency Dispatch** Conduct a feasibility study to establish a redundant dispatch center for police and fire based on the potential or partial failure of the Verdugo Multi-jurisdictional Dispatch Center. This system would be localized to the City of Burbank and could include the future implementation of a Police Department CAD System. The project would be tied into a study for a number of redundant system needs for the City
Estimated Cost	Not determined
Timeline/Schedule	1 to 3 Years
Responsible Agency/Dept.	Joint responsibility between the Information Technology Department, the Police Department and the Fire Department
Financing	General Funds
Goal(s) Addressed	Protect the City's ability to provide emergency services to its citizens in case of a disaster and on a day to day basis in the event of a system failure at the Verdugo facility.
Related Hazard(s)	The greatest risk of failure would be from another quake but it can also be considered an all hazard mitigation measure
Constraints	Financial feasibility

AH-3 **Program/Project Description** **Priority 1 Strategy**	**Mobile GIS Facility** Prepare a cost and feasibility study to develop a Mobile GIS Facility for all hazard response. The system would use current aerial photographs as a base layer. A GIS technical specialist can display structures, roads, and other special data and can plot the progress of the event on additional GIS layers. This system can include digital elevation models and in a wildfire can show fire fighters slopes and aspects that can affect fire behavior. The system requires an experienced GIS technical specialist with additional disaster training. The system has specialized needs: • A converted passenger Van for the specialized rugged equipment needs. • Custom made box for the Plotter, recommended Hewlett Packard 1055 which enables large map printouts • Special water and tear proof paper for field use maps • Portable, custom protected computer equipment to support the GIS software and run the system
Estimated Cost	$75,000.00
Timeline/Schedule	1 year
Responsible Agency/Dept.	Information Technology, Fire and Police Departments
Financing	General Fund and Grants
Goal(s) Addressed	Protect lives and property through enhanced emergency response capability Capture incident data in a manner that will demonstrate a need for mitigation strategies Conduct a real time damage assessment documentation Track Disaster recovery needs as they unfold
Related Hazard(s)	Urban Wildland Fire Earthquake Flood Hazardous Material Biological WMD All Hazards
Constraints	Manpower and financial feasibility, the system requires ongoing maintenance and training that would have to be budgeted annually. It would most likely result in hiring additional personnel that may not be feasibile

AH-4 **Program/Project Description** **Priority 1 Strategy**	**Provide Emergency Power to Key Facilities** Purchase and installation of standby generators and associated electrical transfer switches, wiring and new main switchboards at: 1. McCambridge Recreation Center (evacuation center) 2. Verdugo Recreation Center (evacuation center) 3. Olive Recreation Center (evacuation center) 4. CNG Station (fuel for emergency response vehicles) 5. City Yard (fuel and support for emergency Response vehicles) 6. City Hall (Executive support, and PIO functions) 7. Fire Training Center (location of the EOC) 8. Water Reclamation Plan (need 3 backup power supplies for Operational support) 9. Joslyn Adult Center
Estimated Cost	$2.3 million dollars
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Public Works
Financing	Internal Service Fund and Grant funds
Goal(s) Addressed	Maintain critical services and emergency response capabilities by providing backup power generators
Related Hazard(s)	All Hazards
Constraints	Dependent upon Grant funding to implement, fiscal feasibility

AH-5 **Project Description** **Priority 1 Strategy**	**Emergency Power Program Support for repair field Crews** Purchase eight small backup generators for facilities field repair crews to enable them to respond in a disaster which includes widespread power outages through out the City' The project would require eight 5 KW generators
Estimated Cost	$ 25, 000 per unit with supplies or a total of $200,000.00
Timeline/Schedule	1-2 years
Responsible Agency/Dept.	Public Works
Financing	General funds and Grants as they become available
Goal(s) Addressed	Enhance Emergency response capabilities Enable field repair crews to effect repairs during power outages and at place where power is not available during emergency response
Related Hazard(s)	All hazards
Constraints	Economic feasibility

AH-6 **Program/Project Description** **Priority 1 Strategy**	**Trailer Mounted Portable Generator lights** Construct a trailer-mounted lighting system that would enable crews to repair areas without light and in darkness. The trailer would be able to be moved to work sites by Public Works Crews and would extend their ability to work in emergencies
Estimated Cost	$55,000.00
Timeline/Schedule	1-2 Years
Responsible Agency/Dept.	Public Works
Financing	General Fund and Grants
Goal(s) Addressed	Enhance Emergency Response and Damage repair capability
Related Hazard(s)	All Hazard
Constraints	Funding feasibility

AH-7 **Program/Project Description** **Priority 1 Strategy**	**Battery Backup System for Traffic Lights** Install a battery backup system for traffic signals at an additional 25 intersections. The traffic system power back up would allow emergency vehicles to respond, and prevent gridlock in an emergency.
Estimated Cost	Materials and labor per intersection is $6,000.00, the entire upgrade would cost $150,000.00
Timeline/Schedule	1 to 2 years
Responsible Agency/Dept.	Public Works
Financing	General funds and grants as available
Goal(s) Addressed	Provide safe transportation throughout the City in emergency and disaster situations by keeping traffic moving. Provide the capability for orderly evacuation of areas by traffic control devices. Allow emergency response vehicles to move throughout the City to respond to emergencies in times of power outages
Related Hazard(s)	All Hazard
Constraints	Financial feasibility

AH-8 **Program/Project Description**	**Evacuation Feasibility Study** Conduct a City wide study to support evacuation infrastructure in emergencies. Establish and maintain safe and effective evacuation routes for identified risk areas and identified disaster
Estimated Cost	$10,000.00 per year for on-going hazard route identification and infrastructure maintenance
Timeline/Schedule	Ongoing
Responsible Agency/Dept.	Public Works
Financing	General Funds
Goal(s) Addressed	Support hazard and risk analysis with defined and maintained evacuation procedures and routes
Related Hazard(s)	All hazard
Constraints	Fiscal feasibility

AH-9 **Program/Project Description** **Priority 1 Strategy**	**Explore non-traditional Public and Private mutual aid resources** Utilizing each City Department in reaching out to their vendor and client base: Conduct meetings and identify other methods with the business and industry groups in the City as well as reaching out to other political jurisdictions to identify resources that can be utilized and shared during a disaster.
Estimated Cost	Unknown
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	All City Departments
Financing	Departmental Budgets
Goal(s) Addressed	Enhance emergency response and preparedness
Related Hazard(s)	All Hazards
Constraints	None

AH-10 **Program/Project Description** **Priority 1 Strategy**	**Conduct Feasibility Study for adequacy of Redundancy of Fiber Optic and Wireless Connections** Conduct a feasibility study for adequacy of redundant fiber optic and wireless connections between the various data storage services within the City and identify any improvements for data storage or redundant network linkages. This strategy would support and supplement the following IT strategy. This study would encompass: • Linking systems into the GIS data base • Updating and linking systems to the Hazardous Materials Data Base • Linking to the Permits Plus data storage server • Feasibility of a direct line to Quest systems This feasibility study would look at setting up the Emergency Operations Center with wireless communication to major City facilities along with a built in redundancy.
Estimated Cost	$55,000.
Timeline/Schedule	12 months
Responsible Agency/Dept.	Information Technology
Financing	General Fund Budget
Goal(s) Addressed	Protect ability to communicate during disasters
Related Hazard(s)	All Hazard
Constraints	Fiscal feasibility

AH-11 **Program/Project Description** **Priority 1 Strategy**	**Implementation and Installation of a wireless network** In order to allow for a network redundancy in the event of disruption to the City's fiber network, the IT department proposes to further develop a network of wireless bridge network as a replacement for the antiquated T-1 lines in use by the City. As the project expands they foresee continued incorporation of emergency scenarios into the logic of how the network is established to accomplish goals of enhancing emergency preparedness. IT has purchased several wireless net devices and have began installing them. The goal is for these devices to allow AES encrypted signals to be used by the City. AES is the standard required by the Department of Justice for Police Departments. It is proposed to be able configure the normal day to day communication channels in a matter of minuet to accommodate an emergency situation and the sites can be easily added or removed from the mesh as needed. This system will provide a scalable, reliable secondary network to use in the event of a disaster. In addition the system will enable emergency responders to set up mobile command centers with real time audio, video and data connections to the Emergency Operations Center.
Estimated Cost	$100,000.00
Timeline/Schedule	12 months
Responsible Agency/Dept.	Information Technology (IT)
Financing	General Fund Budget
Goal(s) Addressed	Enhanced Emergency Response Protection of data and communication capabilities
Related Hazard(s)	All Hazard
Constraints	None at this time project is ongoing

AH-12 **Program/Project Description** **Priority 1 Strategy**	**Produce a Data Base Systems Map** Produce a Data System Network Map which would include both the current and proposed expanse of the system. This map would utilize a flow chart type of data mapping to show all possible interlinks and potential redundant systems. This would include a meeting of all of the EOC stakeholders who need to use data in disasters to identify and determine information sharing capabilities and future needs. It is envisioned that the Data System Network Map would include a future needs component.
Estimated Cost	$25,000.00
Timeline/Schedule	12 months
Responsible Agency/Dept.	Information Technology and support departments
Financing	General Fund
Goal(s) Addressed	Identify and enhance the emergency data and communication capability within the City
Related Hazard(s)	All Hazard
Constraints	Fiscal Feasibility

AH-13 **Program/Project Description**	**Increase Emergency Supplies for Employees** Increase Emergency backpack supplies for City employees. Currently a small supply has been issued to full time employees at City Hall area only. A working group would need to meet and determine what supplies are available, and what needs to be added and the location for additional supplies.
Estimated Cost	To be determined
Timeline/Schedule	12 months
Responsible Agency/Dept.	Fire Department Division of Emergency Management
Financing	General Fund
Goal(s) Addressed	Protection of Lives and Continuity of Government
Related Hazard(s)	All hazards
Constraints	Fiscal feasibility

AH-14 **Program/Project Description** **Priority 1**	**Upgrade the Emergency Operations Center to Serve as a secondary 911 Center** Conduct a feasibility study to enable the Emergency Operations Center (EOC) to be upgraded to operate as a secondary communication center for dispatching. It is currently impossible to relocate our 911 primary answer point to the EOC. The current secondary transfer position is Verdugo Fire. The 911 system only allows for one secondary transfer location. This would include having back up software and training that will all our dispatch center to temporarily control operations of the Burband Fire Department if the Verdugo Center is disabled.
Estimated Cost	Undetermined
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Police Fire Information Technology
Financing	To be identified
Goal(s) Addressed	Protect Emergency Response Capability
Related Hazard(s)	All hazard
Constraints	Fiscal feasibility

AH-15 **Program/Project Description**	**Mobile Command Post** A Mobile Command Post would be implemented that would allow the rapid relocation of the dispatch center the command post at a remote location. This strategy would include formulating the Plans and conducting exercises to accomplish this strategy This strategy would include a support component of upgrading a police vehicle to serve as back up Command Post.
Estimated Cost	$100,000.00
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Police Department Fire Department Information Technology
Financing	General Budget and Federal Grants as available
Goal(s) Addressed	Support Emergency Response Capability
Related Hazard(s)	All Hazard
Constraints	Fiscal feasibility

AH-16 **Program/Project Description** **Priority 1 Strategy**	**Provide for Police Station Continuity** A study would be initiated to identify secondary locations to relocate the police headquarters. This study would need to take into consideration of locating at least one secondary headquarters on each side of the I-5 Freeway. The study will need to identify the equipment needs to set these stations up and this equipment will need to include at least one heavy duty tow truck.
Estimated Cost	Not determined at this time
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Police Department
Financing	Not determined
Goal(s) Addressed	Continuity of Police Services
Related Hazard(s)	All Hazard
Constraints	Fiscal feasibility

AH-17 **Program/Project Description** **Priority 1 Strategy**	**Fuel Logistical Support for Emergency Vehicles** The City Emergency Response organizations should have two emergency fueling supply points. These should be at least 1000 gallon storage tanks. The tanks would be installed in earthquake resistant configurations and should be above ground. One tank would be east of the I-5 freeway and one tank would be west of the I-5 freeway. The storage capacity of these tanks should be to a factor of 66 refills per emergency vehicle. The emergency refueling stations would also need to provide both gasoline and diesel. The tanks should be capable of operation with or without electricity.
Estimated Cost	To be determined by engineering estimate
Timeline/Schedule	1-2 years
Responsible Agency/Dept.	Police Fire Public Works
Financing	To be determined
Goal(s) Addressed	Support of Emergency Response operational continuity and Prepare for handling of multiple or dynamic critical incidents and disasters
Related Hazard(s)	All Hazard
Constraints	Fiscal Feasibility

AH-18 **Program/Project Description** **Priority 1 Strategy**	**City Wide Fuel Tank Program** Issue a City wide policy that all City owned vehicles will keep a minimum fuel level of ½ tank. This is to protect the ability to utilize the vehicle following a disaster until emergency fuel systems can be implemented if needed.
Estimated Cost	None
Timeline/Schedule	3 months
Responsible Agency/Dept.	City Manager
Financing	None
Goal(s) Addressed	Continuity of Government Emergency Response capability
Related Hazard(s)	All hazard
Constraints	None

AH-19 **Program/Project Description** **Priority 1 Strategy**	**Automated Emergency Defibrillators (AEDs) for City-owned Buildings** Procure and install Automated Emergency Defibrillators (AEDs) in all City-owned buildings throughout the City of Burbank including Park & Recreation facilities, Implement a training program to certify a core group of personnel at City-owned buildings in the use and care of AEDs.
Estimated Cost	To be determined.
Timeline/Schedule	1-2 years
Responsible Agency/Dept.	Fire Park, Recreation and Community Services
Financing	To be determined
Goal(s) Addressed	Support of Emergency Response operational continuity and Prepare for handling of multiple or dynamic critical incidents and disasters
Related Hazard(s)	All Hazards
Constraints	Fiscal Feasibility

Earthquake (EQ)

EQ-1 **Program/Project Description** **Priority I, ongoing Mitigation Strategy**	**Seismic Upgrade** Support the ongoing seismic upgrade to City Buildings. Currently the City is starting to work (November 2004) on the lst 9 buildings for seismic upgrade and the plan is to continue this work: The lst 9 bldgs. are Fire Station 16, Starlight Amphitheater, McCambridge Recreation Center, Olive Recreation Center, Field Services Administration, Refuse Locker Room, Police Pistol Range, Water Reclamation Adminstration, Verdugo Recreation Center. May of 2006 an additional 9 buildings will be started for the retrofit and November of 2007 and additional 6 buildings will be started
Estimated Cost	Current and past appropriation $2,220,000.00 Available through Internal Services Fund $2,500,000 Total Project Budget through FY 07/ 08 $14,000,000.00
Timeline/Schedule	Project is scheduled to last through 2008
Responsible Agency/Dept.	Public Works
Financing	Gap Funding
Goal(s) Addressed	Earthquake Safety
Related Hazard(s)	Earthquake
Constraints	None, this is an ongoing program

EQ-2 **Program/Project Description** **Priority 1 Strategy**	**Purchase a Closed Circuit Television unit (CCTV)** Purchase and implement a rapid response program for assessment of damaged sewer system and storm drain facilities. The City currently does not have this system and would be in line to contract out if a regional disaster struck.
Estimated Cost	$180,000.00
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Public Works
Financing	Enterprise Fund and Federal Grants as available
Goal(s) Addressed	Project the public safety by rapid response and assessment of critical services
Related Hazard(s)	Earthquake Transportation Incident Hazardous Materials Flood Landslide
Constraints	Fiscal feasibility

EQ-3 **Program/Project Description**	**State and Federal Data Sharing Project** Establish new and continue ongoing working relationships with state and federal resources, primarily CalTrans to exchange Freeway risk analysis data for ability to withstand seismic events. Assist Caltrans in carrying out seismic programs within the City of Burbank by lending support to those programs. Research data available to ensure interstate 5 and State Route 134 over and under-crossings are capable of seismic events and establish level of seismic event they could be expected to withstand
Estimated Cost	$12,000 Staff time
Timeline/Schedule	Ongoing
Responsible Agency/Dept.	Public Works
Financing	Current Budget
Goal(s) Addressed	Seismic safety of transportation systems
Related Hazard(s)	Earthquake Transportation incidents
Constraints	None

EQ-4 **Program/Project Description**	**Conduct Seismic Safety Studies of Buildings for Mitigation needs** Promote and conduct seismic safety studies of government owned facilities to identify acceptable performance mitigation measures and cost effective mitigation techniques for both structural and non-structural elements. The first emphasis would be on government identified critical facilities.
Estimated Cost	$35,000.00 per building for Structural Seismic Safety Study
Timeline/Schedule	1 to 7 years
Responsible Agency/Dept.	Public Works
Financing	General Funds and Federal Grants
Goal(s) Addressed	Protection of life and property in a earthquake event
Related Hazard(s)	Earthquake
Constraints	Fiscal feasibility

EQ-5 **Program/Project Description** **Priority 1**	**Conduct Structural Analysis of Evacuation Centers** Conduct a Seismic Structural Safety Study of all buildings owned by the City that will serve as care and shelter of evacuees during a disaster event with emphasis on earthquake. Implement the recommendations for seismic and safety upgrades for those buildings
Estimated Cost	Seismic Survey $35,000. per bldg… upgrades to be determined
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Public Works
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Protection of Life and Property and Enhanced Emergency Response capability of Mass Care and Shelter
Related Hazard(s)	Earthquake
Constraints	Fiscal Feasibility

EQ-7 **Program/Project Description**	**Contingency Planning for the City with the failure of the I-5 Freeway** Given the high risk earthquake hazard for the City of Burbank there is cause for concern that the crossing points over and under the I-5 freeway will be damaged or destroyed as well as the blocking bridges and underpasses. This situation would block the police and fire Department from responding equipment from East to West in the City and isolate Police Department personnel and equipment. Several steps can be taken to position additional resources to respond should the City be divided by a transportation failure. A reserve fleet of police cars should be maintained by the City purchasing enough primary vehicle equipment that will all storage and maintenance of 10 police cars at the City Yards. This would give the police department a minimal fleet should the City's underground parking structure fail or be compromised and blocked and it would additionally support Police Department operations if the City was divided into a split configuration by the Freeway damages caused by an earthquake.
Estimated Cost	To be determined by further study
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Police Department
Financing	General Budget
Goal(s) Addressed	Protect Emergency Response Capabilities
Related Hazard(s)	Earthquake WMD Railroad accident incident
Constraints	Fiscal Feasibility

EQ-8 **Program/Project Description** **Priority 1 Strategy**	**Purchase and Maintain a Heavy Rescue and Debris Clearance Capability** The Police Department recommends a heavy rescue and debris clearance capability be dedicated for debris clearance and restoration of access to the police garage and other governmental facilities.
Estimated Cost	$250,000 for the equipment
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Public Works Police
Financing	General Budget
Goal(s) Addressed	Protection of Critical Facilities and Emergency Response Capability
Related Hazard(s)	Earthquake WMD
Constraints	Fiscal feasibility

EQ-9 **Program/Project Description** **Priority 1 Strategy**	**Emergency Escape System** Identify multi-story buildings and provide emergency escape ladders where needed. This strategy could be tied to the Seismic Survey of the City's buildings and ladder needs identified in that survey
Estimated Cost	$10,000.00
Timeline/Schedule	12 months
Responsible Agency/Dept.	Public Works
Financing	General Fund
Goal(s) Addressed	Life Safety/ evacuation
Related Hazard(s)	Earthquake Power Failure Severe Weather WMD
Constraints	Fiscal feasibility

EQ-10 **Program/Project Description** **Priority 1 Strategy**	**Emergency Shelter Communication** Provide each designated emergency shelter with a laptop computer with wireless connection capabilities to enhance emergency communications with the shelters and the emergency responders and Emergency Operations Center
Estimated Cost	$5,000.00 Per shelter
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Information Technology
Financing	General Fund and Federal Grants when available
Goal(s) Addressed	Emergency Shelter and Mass Care Capability enhancement
Related Hazard(s)	Earthquake All hazards requiring evacuation and temporary shelter
Constraints	Fiscal feasibility

Transportation Accidents (TA)

TA-1 **Program/Project Description** **Priority 1**	**Assess the feasibility of grade separation at all railroad crossing in the City Burbank** There are a number of grade crossings in the City where the Metrolink/Union Pacific Right of way crosses city streets. Each of these crossings presents a certain degree of risk with respect to a train-vehicle collision. This project will attempt to quantify that risk and evaluate the feasibility of constructing grade separations.
Estimated Cost	To be determined
Timeline/Schedule	1-5 years
Responsible Agency/Dept.	Public Works Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Haz Mat Transporation Accident
Constraints	Fiscal feasibility

TA-2 **Program/Project Description** **Priority 1**	**Construct grade separations at crossing in the City of Burbank** There are a number of grade crossings in the City where the Metrolink/Union Pacific Right of way crosses city streets. Each of these crossings presents a certain degree of risk with respect to a train-vehicle collision. This project will reduce that risk through the construction of grade separations at each identified crossing.
Estimated Cost	To be determined
Timeline/Schedule	1-5 years
Responsible Agency/Dept.	Public Works Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Haz Mat Transporation Accident
Constraints	Fiscal feasibility

Wildland Urban Interface Fire (WF)

WF-1 **Program/Project Description** **Priority 1**	**Post Fire Debris Flow Planning** Combine the efforts of the Fire Department, Public Works Department and Information Technology to develop a post-fire debris flow geographical area identification GIS layer. Determine the appropriate mitigation physical activity to implement in the identified areas to include but not be limited to K-rail, sandbags, and water bars in hazard areas. Produce post-fire debris risk maps and make them available to the public through websites and other distribution methods in the debris flow risk areas. Identification of risk areas would be based on historical data and projected risk analysis
Estimated Cost	$150,000.00
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Information Technology GIS Division Public Works Fire Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property Task: Post Fire Hazard Mitigation
Related Hazard(s)	Wild land Fire Severe Weather Flood
Constraints	Fiscal feasibility

WF-2 **Program/Project Description** **Priority 1**	**Biomass Program** The application of a 6”-12” layer of mulch-like material, in conjunction with a brush clearance program, has been demonstrated to reduce the spread of fire. This program would take vegetation chippings/clippings generated by city parks crews and import them into certain areas of the Mountain Fire Zone for protection. This is primary achieved through the use of hand crews and mechanical masticators to chop the vegetation
Estimated Cost	$500,000 initial and $150,000 annually
Timeline/Schedule	1-5 years
Responsible Agency/Dept.	Fire Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Wildland fire
Constraints	Fiscal feasibility

WF-3 **Program/Project Description** **Priority 1**	**Improve the Stough Fire Road for better storm resiliency** The Stough Fire Road/Truck Trail is the most strategically imporatnt fire road in the City of Burbank. The road, while substantial, has repetitively and negatively been impacted during seasons of heavy rains. This project would involve constructing the road so as make it better able to withstand significant rains and could involve the placement of drainage culverts and other pipe to mitigate the effects of winter storms.
Estimated Cost	To be determined
Timeline/Schedule	1-5 years
Responsible Agency/Dept.	Public Works Department/Fire Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Wildland fire Winter storms
Constraints	Fiscal feasibility

WF-4 **Program/Project Description** **Priority 1**	**Hiking Trails Construction** The City maintains numerous hiking trails used primarily for recreation. An alternative benefit of these trails though is for access of fire crews into the hillside area to fight an interface fire. This project would consist of installing numerous erosion control devices such as water bars and corrugated metal pipe along those trails to mitigate the damage caused by winter storms.
Estimated Cost	$425,000
Timeline/Schedule	1-5 years
Responsible Agency/Dept.	Parks, Recreation, and Community Services Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Wildland fire
Constraints	Fiscal feasibility

Terrorism and Weapons of Mass Destruction (WT)

WT-1 **Program/Project Description** **Priority 1**	**Security Systems** Install security systems in all city buildings to prevent intruders during business hours and to provide after-hour security.
Estimated Cost	To be determined
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Information Technology GIS Division Police Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Terrorism/WMD
Constraints	Fiscal feasibility

Water/Waste Water Loss (WW)

WW-1 **Program/Project Description** **Priority 1**	**Access to Foy Park and Valley Pump Station** Design and construct access to Foy Park and Valley Pump Station water and electrical substations. Design and construct access to reclaimed water pumps at McCambridge Park.
Estimated Cost	To be determined
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Park, Recreation and Community Services Public Works
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Water/Waste Water Loss (P) Utility Loss
Constraints	Fiscal feasibility

Hazardous Materials (HM)

HM-1 **Program/Project Description** **Priority 1 Strategy**	**Hazardous Materials Awareness Program** Conduct City Employee particularly City field personnel's awareness of potential response to hazardous materials incidents. Where feasible train field personnel in the State approved Haz Whopper Program and Confined Space Safety Program.
Estimated Cost	Approximately $500.00 per person for the training
Timeline/Schedule	1-3 years and ongoing
Responsible Agency/Dept.	Fire Department Public Works Department
Financing	General Fund
Goal(s) Addressed	Protect lives by ensuring worker safety in a hazardous materials environment
Related Hazard(s)	Hazardous Materials Transportation Incident Earthquake (disasters that may demand rescue or repair work in a confined space environment)
Constraints	Fiscal feasibility

HM-2 **Program/Project Description** **Priority 1 Strategy**	**Hazardous Materials Shelter in Place Public Information Program** Conduct a public information and public awareness campaign over City and private media as well as through the local school systems to teach the public the requirements of a hazardous materials shelter in place program. Publish public Information materials for Shelter in place techniques
Estimated Cost	$10,000.00
Timeline/Schedule	1 – 2 years
Responsible Agency/Dept.	Fire Department
Financing	General Fund Fire Department Budget
Goal(s) Addressed	Protect lives and property in hazardous environment
Related Hazard(s)	Hazardous Materials WMD (Bio Hazard)
Constraints	Fiscal feasibility

Aviation Disaster (AD)

AD-1 **Program/Project Description** **Priority 1 Strategy**	**Provide Emergency Power for Airport Operations** 1. Purchase and installation of standby generators and associated electrical transfer switches, wiring and new main switchboards at key locations throughout the Bob Hope Airport to ensure tower and terminal operations and emergency services.
Estimated Cost	$5 million dollars
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Public Works, Bob Hope Airport Authority
Financing	Grant funds, City/Airport Joint Funding
Goal(s) Addressed	Maintain critical services and emergency response capabilities by providing backup power generators
Related Hazard(s)	Aviation Disasters (P), Earthquake, WMS/Terrorism, Utility Loss, Severe Weather, Explosion
Constraints	Dependent upon Grant and joint funding to implement, fiscal feasibility

AD-2 **Program/Project Description**	**Airport Mobile Command Post** Procure, equip and staff a mobile command post for the Bob Hope Airport to be used in conjunction with local Burbank agencies for response to airport-related disasters and incidents requiring unified command. The command post will be stationed at the Bob Hope Airport and used primarily for airport-related matters, however will be available to the City of Burbank once situations at the Airport are stabilized.
Estimated Cost	$475,000.00
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Bob Hope Airport Fire and Police Police Department Fire Department Information Technology
Financing	Combined funds and Federal Grants as available
Goal(s) Addressed	Support Emergency Response Capability
Related Hazard(s)	Aviation Disaster (P), All Hazards
Constraints	Fiscal feasibility

Severe Weather (SW)

SW-1 **Program/Project Description** **Priority 1 Strategy**	**Debris Basin Evaluation** Conduct Hydrology studies for the City's nine debris basins to estimate runoff and debris flows from contributing areas
Estimated Cost	$540,000.00
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Public Works
Financing	General fund and grants as available
Goal(s) Addressed	Protect the City against flood hazard Ensure the safety of the debris basins Ensure the adequacy of debris basins
Related Hazard(s)	Severe Weather Flood
Constraints	Fiscal Feasibility

SW-2 **Program/Project Description** **Priority 1 Strategy**	**Debris Basin Structural Improvement** Based on the results of the debris basin hydrology program, the City would initiate and complete identified structural modifications and other recommended modifications to provide appropriate long-term flood water control and debris capacity
Estimated Cost	$2,250,000 note: This estimate does not include the biological studies required or biological mitigation measures.
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Public Works
Financing	General Fund and Grants as available
Goal(s) Addressed	Enhance the City of Burbank's Flood Protection capability
Related Hazard(s)	Severe Weather Floods
Constraints	Fiscal feasibility

SW-3 **Program/Project Description** **Priority 1 Strategy**	**Vactor Truck Purchase** The City would purchase two additional Vactor Trucks to be used to prevent and mitigate potential spills and overflows from the sewers
Estimated Cost	The cost for these trucks is estimated to be $300,000.00
Timeline/Schedule	1 to 3 years
Responsible Agency/Dept.	Public Works
Financing	Burbank Enterprise Fund and Federal Grants as available
Goal(s) Addressed	Protect the residents and the environment from harm caused by sewage overflows in times of flood and high water flow
Related Hazard(s)	Severe Weather Flood
Constraints	Fiscal feasibility

SW-4 **Program/Project Description** **Priority 1 Strategy**	**Maintain Flood Control Channels and Storm Drains** Conduct ongoing preventive maintenance and ongoing maintenance of flood control channels and storm drains in accordance with habitat preservation policies utilizing methods such as periodic dredging of channels, channel and drain repair, de-silting and clearing to prevent any loss of the facilities effective use.
Estimated Cost	$500,000 per year
Timeline/Schedule	Ongoing Mitigation Program
Responsible Agency/Dept.	Public Works
Financing	Public Works General Budget and Federal Grants when available
Goal(s) Addressed	Protection of Lives and Property
Related Hazard(s)	Severe Weather Flood
Constraints	Fiscal feasibility

SW-5 **Program/Project Description** **Priority 1**	**Protection of Electronics Equipment** Recent electrical storms have demonstrated that various electronic equipment used by the city is vulnerable to lighting strikes. This project would include the installation of appropriate countermeasures on traffic cameras, radio relay equipment, and water reservoir telemetry systems.
Estimated Cost	$350,000
Timeline/Schedule	3-5 years
Responsible Agency/Dept.	Water and Power Department, Public Works Department
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Wildland fire Transportation accidents Terroism/WMD
Constraints	Fiscal feasibility

Flood (FL)

FL-1 **Program/Project Description** **Priority 1**	**Flooding & Water Contamination Prevention** Design and implement flooding and water contamination projects for Palm Park Ball field, Brace Park, Bel Aire Park, and for the Park Yard.
Estimated Cost	To be determined
Timeline/Schedule	1-3 years
Responsible Agency/Dept.	Burbank Water and Power Public Works
Financing	General Fund and Federal Grants as available
Goal(s) Addressed	Promote public safety and protection of property
Related Hazard(s)	Flood (P) Severe Weather Water/Waste Water
Constraints	Fiscal feasibility

Section 6 – Future Actions & Goals

Summary

The City of Burbank 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, Objectives and Actions

Listed below are the City of Burbank 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 of Burbank 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 City'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 of Burbank representatives met with the consultant staff and Departments to specifically discuss these hazard-related goals, objectives and actions as they related to the overall Plan. Representatives of numerous City of Burbank departments were involved in hazard mitigation planning. Those Departments are listed specifically in the minutes of the meetings.

The City of Burbank has developed the following Long Term Goals for their Hazard Mitigation Plan Program.

Long Term Goals

Goal 1. Promote Disaster-resistant future development.

Goal 2. Increase public understanding and support for effective hazard mitigation.

Goal 3. Build local support and commitment to become less vulnerable to hazards.

Goal 4. Enhance hazard mitigation coordination and communication with federal, state, local jurisdictions.

Goal 5. Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and City of Burbank-owned facilities from the following high risks:

- Earthquake
- Transportation Accident
- Transportation Loss
- Wild Land/Urban Interface Fire in the City

- Terrorism/WMD
- Utility Loss/Disruption/Substations
- Water/Waste Water Disruption
- Hazardous Materials Incidents

Long Term Objectives and Actions

The City of Burbank developed the following broad list of objectives and actions to assist in the implementation of each of their identified goals. The City of Burbank 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. A discussion of the prioritization and implementation of the action item.

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 1 Review Codes every 3 years.

Action 2 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 1 Development should be in harmony with existing topography.

Action 2 Development patterns should respect environmental characteristics.

Action 3 Development should be limited in areas of known geologic hazards.

Action 4 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

Objective5: Increase public understanding, support and demand for hazard mitigation for new developments.

Action 1 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 City of Burbank's website.

Action 3 - Gain public acceptance for avoidance policies in high hazard areas.

Goal 2: 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.

Objective 2 Encourage other organizations to incorporate hazard mitigation activities.

Action 1 - Leverage resources and expertise that will further hazard mitigation efforts.

Action 2 - Update the City of Burbank's multi-hazard mitigation plan on a regular basis.

Action 3 - Establish and maintain lasting partnerships through existing City of Burbank organizational relationships.

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 3: 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 1 - Identify hazard-prone structures, where feasible.

Action 2 - Encourage and continue to study ground motion, landslide, and liquefaction.

Objective3: Coordinate with and support existing efforts to mitigate earthquake hazards

Action 1 - Identify projects for pre-disaster mitigation funding.

Action 2 - Design and implement an ongoing public seismic risk assessment program.

Action 3 - 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 1 - Assess City of Burbank's utility infrastructure with regard to earthquake risk, including public and private utilities.

Action 2 - Encourage the public to prepare and maintain a 3-day preparedness kit for home and work for all hazards

Goal 4: 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 1 - Assure adequate funding, where feasible, to restore damaged facilities to 100-year flood design.

Action 2 - Update storm-water system plans and improve storm water facilities in high-risk areas.

Action 3 - 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 1 - Develop a flood control strategy that ensures coordination with Federal, State, county and local agencies.

Action 2 - Improve hazard warning and response planning.

Action 3 - 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 1 - Maintain, develop and implement hazard awareness program.

Prioritization and Implementation of Action Items

Once the comprehensive list of City of Burbank'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 of Burbank.

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 Burbank will work together with members of the community and adjacent jurisdictions.

Potential Funding Source: FEMA Grants/ General Funds for City of Burbank.

Implementation Timeline: 1 Year

Action Item #2: Publicize and encourage the adoption of appropriate hazard mitigation actions.

Coordinating Individual/Organization: City of Burbank

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: Community Development Department – Building Division

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: Public Works Department

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: Media & Public Relations & Information Technology

Potential Funding Source: General Fund/Federal or State grants

Implementation Timeline: 1 - 3 years

Capabilities Assessment

The City of Burbank 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 City. The administrative and technical capabilities the City, 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	Community Development
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Community Development
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y	Community Development
Floodplain manager	Y	Los Angeles County Public Works
Surveyors	Y	Los Angeles County Public Works
Staff with education or expertise to assess the community's vulnerability to hazards	Y	Community Development/Engineers
Personnel skilled in GIS and/or HAZUS	Y	Community Development
Scientists familiar with the hazards of the community	N	
Emergency manager	Y	Community Development
Grant writers	Y	Community Development/Administration

Regulatory Tools

The legal and regulatory capabilities of each jurisdiction 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	
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	Y	Media District Specific Plan adopted Jan 1991
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	Y	
A post-disaster recovery plan	Y	
Real estate disclosure requirements	N	State
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 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	County
Capital improvements project funding	Y	
Authority to levy taxes for specific purposes	Y	*Voters Approval
Fees for water, sewer, gas, or electric service	Y	Burbank Water & Power
Impact fees for homebuyers or developers for new developments/homes	N	
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

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" will be 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

Because projects are planned for 1-3+ years in the future, the City of Burbank decided that it would not be efficient to do cost-benefit reviews at this stage in the planning process for the strategies listed in Section 5. BCRs using the STAPLEE process will be conducted when funding is earmarked and scheduling is firm for mitigation projects.

Section 7 – Plan Maintenance

Monitoring, Evaluating & Updating

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 Burbank will integrate public participation throughout the plan maintenance process. Finally, this section includes an explanation of how departments intend to make considerations for the mitigation strategies outlined in this Plan into existing planning mechanisms.

The City of Burbank will be responsible for monitoring the plan annually for updates to goals, objectives, and action items. If needed, participants will coordinate through the City of Burbank's Hazard Mitigation Planning Team to integrate these updates into the Plan. The Chairman of the City of Burbank Hazard Mitigation Planning Team will be responsible for monitoring the overall Plan for updates on an annual basis. The Chairman will reconvene the Steering Committee as needed to make these updates.

The Plan will be evaluated by The City of Burbank Hazard Mitigation Planning Team 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 Burbank Department Heads or their select representatives 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 Burbank, Los Angeles County Operational Area, as well as changes in State or Federal regulations and policy. The City of Burbank 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 Burbank's lead team members will be the responsible group for updates to the Plan. All City of Burbank participants will be responsible to provide the Planning Team Chairperson with department-level updates to the Plan when/if necessary as described above. Every five years the updated plan will be submitted to the State of California and FEMA for review.

The City of Burbank 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 Burbank 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 Burbank 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 Burbank website. The site will contain contact information for City of Burbank to which people can direct their comments and concerns.

All public feedback will be forwarded to the appropriate Hazard Mitigation Planning Team 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 Burbank. 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 Planning Team 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.

Glossary of Acronyms

ARC	American Red Cross
BFE	Base Flood Elevation (100 yr.)
BIA	Bureau of Indian Affairs
BICEP	Business and Industry Council for Emergency Preparedness
BLM	Bureau of Land Management
BOR	Bureau of Reclamation
CALTRANS	California Department of Transportation
CBSC	California Building Standards Commission
CCC	California Conservation Corp
CDC	Center for Disease Control
CDEC	California Data Exchange Center
CDF	California Dept. of Forestry and Fire Protection
CDFA	California Department of Food and Agriculture
CFSA	Consolidated Farm Service Agency
CFR	Code of Federal Regulations
CIS	Chemical Inventory System
CRDL	Chemical and Radiation Detection Laboratory
CLETS	California Law Enforcement Telecommunication System
CRS	NFIP Community Rating System
DMA 2000	Disaster Mitigation Act of 2000
DFG	California Department of Fish and Game
DOC/DMG	California Department of Conservation/Division of Mines and Geology
DoD	U.S. Department of Defense
DOT	U.S. Department of Transportation
DOE	U.S. Department of Energy
DPR	California Department of Parks and Recreation
DPW	Department of Public Works
DWR	California Department of Water Resources
EAL	Federal Emergency Action Levels
EIS	Early Implementation Strategy
EIS/EIR	Environmental Impact Statement & Environmental Impact Report
EPA	U.S. Environmental Protection Agency

ESA	Explosive Storage Area
EXPL	Explosives
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Maps
GHAD	Geological Hazard Statement Districts
GIS	Geographic Information System
HMP	Hazard Mitigation Program
HMGP	Hazard Mitigation Grant Program
HUD	US Department of Housing and Urban Development
HVA	Hazard Vulnerability Analysis
IA	Individual Assistance Program
ICBO	International Congress of Building Officials
ICS	Incident Command System
IFGP	Individual Family Grant Program
IHMT	Interagency Hazard Mitigation Team
JFOC	Joint Flood Operations Center
JIC	Joint Information Center
JOC	Joint Operations Center
LACO	Los Angeles County
LPG	Liquefied Petroleum Gas
MSDS	Material Safety Data Sheet
NFIP	National Flood Insurance Program
NFPA	National Fire Protection Agency
NPDES	National Pollutant Discharge Elimination System
NOAA	National Oceanic and Atmospheric Administration
NMF	National Marine Fisheries
NPGA	National Propane Gas Association
NPS	National Park Service
NRC	U.S. Nuclear Regulatory Commission
NRCS	U.S. Natural Resource Conservation Service
NWS	National Weather Service
OEM	Office of Emergency Management
OES	Office of Emergency Services
OMB	US Office of Management and Budget

PA	FEMA Public Assistance Program
PDA	Preliminary Damage Assessment
PG&E	Pacific Gas and Electric
RCD	Resource Conservation Districts
RFC	NWS River Forecast Center
SBA	U.S. Small Business Administration
SCCAG	Southern California Council of Governments
SEMS	Standard Emergency Management System
SOP	Standard Operating Procedure
SRB	State Reclamation Board
UBC	Uniform Building Code
USACE	US Army Corps of Engineers
USCG	United States Coast Guard
USDA	United States Department of Agriculture
USFS	United States Forestry Service
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
USNRC	U.S. Nuclear Regulatory Commission
VOLAG	Volunteer Agencies