

City of Pico Rivera
El Rancho Unified School District
Pico Water



Multi-Jurisdiction
Hazard Mitigation Plan

Version 1.1

November 2004

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Section 1 – Introduction

Executive Summary

Across the United States, natural and human-caused disasters have led to increasing levels of death, injury, property damage, and interruption of business and government services. The impact on families and individuals can be immense and damages to businesses can result in regional economic consequences. The time, money and effort to respond to and recover from these disasters divert public resources and attention from other important programs and problems. With five presidential disaster declarations, three fire-suppression authorizations from the Federal Emergency Management Agency (FEMA) and one disaster-related Act of Congress since 1992, the planning partners of The City of Pico Rivera, the Pico Water District and the El Rancho School District recognize the consequences of disasters and the need to reduce the impacts of natural and human-caused hazards. These planning partners shall be known in this Plan as the Planning Jurisdictions.

The elected and appointed officials of this Plan's Multi-Jurisdictional Planning Jurisdictions have chosen to carefully select mitigation actions in the form of projects and programs can become long-term, cost effective means for reducing the impact of natural and human-caused hazards.

This is the first version of the *Multi-Jurisdictional Hazard Mitigation Plan for City of Pico Rivera, California, the Pico Water District and El Rancho Unified School District* and was prepared with input from planning jurisdictions, regional stakeholders, contract service representatives, residents, responsible officials, Dimensions Unlimited Inc. consultants, and with the support of Los Angeles County, the State of California Office of Emergency Services and the Federal Emergency

Management Agency (FEMA). Through completion of this plan the Planning Jurisdictions have made an effort that will continue with many years of commitment to the reduction of risks through hazard mitigation.

This plan will be shared in electronic format with regional jurisdiction and the County to encourage and assist with a regional risk reduction effort. The Multi-jurisdictional Hazard Mitigation Plan will guide the Planning Jurisdictions toward greater disaster resistance in cooperation and coordination with the character and needs of the community.

Federal legislation has historically provided funding for disaster relief, recovery, and some hazard mitigation planning. The Disaster Mitigation Act of 2000 (DMA 2000) has been enacted legislation to guide 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.

The law included specific requirements for:

- Documentation of the process the Planning Jurisdictions have implemented to prioritize and study the hazards and to prepare the plan and conduct the analysis required.
- Extensive outreach to the public and to other political jurisdictions in the region, inviting comment and input into the plan on both the risk prioritization and the hazard mitigation strategies.

- Setting future goals and tasks to carry out the overall mitigation plan;
- Review and incorporation of existing plans, studies, reports and technical information;
- A listing of local ordinances which affect or promote disaster mitigation.
- Details of ongoing mitigation projects.

To summarize, this document contains:

- The City of Pico Rivera, the Pico Water District and the El Rancho Unified School District,(hereinafter these jurisdictions will be referred to as the Planning Jurisdictions) Complete Hazard Vulnerability Analysis with historic reviews of disasters in the region and an analysis of damage projections for future disasters.
- Prioritization of Planning Jurisdictions Hazards for mitigation activities. The risk analysis also prioritized risks in high, moderate and low risk categories.
- Hazard Mitigation Strategy Goals and Objectives;
- 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 Pico Rivera Multi-Hazard Mitigation Planning Team,(Planning Jurisdictions) 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 Pico Rivera Multi-Hazard Mitigation Planning Team to assist in the further development, prioritization and implementation of the recommended Hazard Mitigation strategies. This group was tasked with prioritizing the hazards, collecting the history and documentation and formulating future mitigation strategies.

This document also provides a framework for the identification and coordination of Hazard Mitigation strategies developed in the Planning Jurisdictions 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 Pico Rivera, the Pico Water District and the El Rancho Unified School District..

This plan identifies and evaluates specific strategies to be considered by the each of the Planning Jurisdictions and their agencies and departments. 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 Pico Rivera Multi-Hazard Mitigation Planning Team, Planning Jurisdictions and the City's agencies, departments, the and private groups.

Whenever feasible selected strategies will be further developed for funding and implementation by the lead jurisdictions 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 Pico Rivera and regional geographical area Hazard Vulnerability Analysis (HVA) that considers natural, technological, and human-caused risks to which the City and its Planning Jurisdictions 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, El Rancho School Board, and Pico Water District's governing board and funded in order to be implemented as official Hazard Mitigation Strategies.

Plan Adoption

This multi-jurisdictional Plan is a comprehensive description of the City of Pico Rivera's, Pico Water District's and the El Rancho Unified School Districts/s commitment to reduce or eliminate the impacts of disasters. This Plan is coordinated and maintained by the Pico Rivera Multi-jurisdictional Planning Team, and is the culmination of input and recommendations from numerous stakeholders, citizens, private businesses and organizations.

The Plan will be reviewed by the Hazard Mitigation Planning Team, and sent to each individual jurisdiction participating for adoption by their governing body. Each of the Planning Jurisdictions governing bodies will adopt the Plan. The City of Pico Rivera's City Council will adopt the Plan, the El Rancho Unified School District elected School Board will Adopt the Plan and the Adopting body for the Pico Water District

Upon review and approval of the final draft the plan will be forwarded to the State of California Office of Emergency Services for review and adoption and forwarding to the Federal Emergency Management Agency (FEMA) for approval.

In adopting this Plan the Planning Jurisdictions will comply with all applicable State, Federal and local statutes and regulations and will review and update this Plan at least every five years.

Adoption documentation is provided in APPENDIX B of this document.

Legal Authority

Assurances

This Plan will Comply with all Federal, State and Local Laws as applicable.

Federal Laws

1. " The Federal Civil Defense Act of 1950"
2. Public Law 96-342 "The Improved Civil Defense Act of 1980"
3. Public Law 93-288 "The Robert T. Stafford Disaster Relief Act of 1974"
4. Section 322, Mitigation Planning of the Robert T. Stafford Disaster Relief and Emergency Assistance Act
5. Public Law 106-390 enacted by Section 104 of the Disaster Mitigation Act of 2000 (DMA)
6. Interim Final Rule for DMA 2002 as published in the February 26, 2002, at 44 CFR Part 201
7. Flood Disaster Protection Act of 1973 (PL-91-646)

State Laws:

1. Standardized Emergency Management System (SEMS)
2. Un-reinforced Masonry Building Law

Local Codes & Ordinances/ Capabilities Assessment

City of Pico Rivera

Regulatory Tools (ordinances, codes, plans)		Local Authority (Y/N)
A.	Building code	Y
B.	Zoning ordinance	Y
C.	Subdivision ordinance or regulations	Y
D.	Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y
F.	Site plan review requirements	Y
G.	General or comprehensive plan	Y
H.	A capital improvements plan	Y
I.	An economic development plan	Y
J.	An emergency response plan	Y
K.	A post-disaster recovery plan	Y
L.	A post-disaster recovery ordinance	
M.	Real estate disclosure requirements	Y
N.	California Government Code 8607 (SEMS)	Y

Pico Water District and City of Pico Rivera Water Department

Regulatory Tools (ordinances, codes, plans)		Local Authority (Y/N)
A.	Urban Water Management Plan(UWMPA	Y
B.	California Water Code Section 10610, 10631,10632 and 10633	Y
C.	Water Replenishment District WRD of 1959	Y
D.	EPA Hazard Vulnerability Assessment and Emergency Operation Plan	N in process
E.	California Government Code Section 8607 (SEMS)	Y

El Rancho Unified School District

Regulatory Tools (ordinances, codes, plans)		Local Authority (Y/N)
A	California Education Code Katz Act Section 35295-35297	Y
B	California Government Code Petris Bill Secion 8607	Y
C	California Education Code The Huges Bill Sec. 35294.2	Y
D	Field Act/Garrison Act/Riley Act – Building Codes	Y

Planning Jurisdictions Identified Mitigation Constraints

1. The Pico Rivera Planning Jurisdictions contract services for fire, library and law enforcement services, in the event of a major disaster they would not have direct control over this emergency response and would depend on Los Angeles County to provide the services.
2. The Pico Rivera Planning Jurisdictions have rated high hazards to include utility loss; the Planning Jurisdictions do not have direct control over their utilities with the partial exception of the city owned water Department. Utility loss is a major concern for the Planning Jurisdictions and the lack of accurate and timely risk analysis data form the electrical industry causes a serious constraint.
3. Transportation Accidents and incidents are rated as a high priority for the Planning Jurisdictions and the jurisdictions have minimal advisory input for the Freeways, highways and railroads that are within and adjacent to the city boundaries and affected Planning Jurisdictions.
4. The Whittier Narrows Dam is a flood control and water conservation project constructed and operated by the U.S. Army Corp of Engineers. This dam is also a central element of the Los Angeles County Drainage Area flood control system. The City of Pico Rivera has no control or influence over the uses and operation of this dam

Section 2 – Hazard Mitigation Planning Process

Hazard Mitigation Planning Participation (Planning Jurisdictions)

Steering Committee Members

Ceci Cheng	City Administrative Analyst, Chairperson
Chris Schaefer	City Director of Administrative Services, Alternate
Scott Wasserman	City Parks and Recreation, Primary
Adrian H. Diaz	City Water Division, Primary
Tina Hansen	City Parks and Recreation, Alternate
Michelle Ramirez	City Housing Department, Primary
Bob Ridley	City Finance Department, Alternate
Bill Shannon	City Housing Department, Alternate
Michael Moore	City Public Works, Co-Chairperson
Michael Gersch	City Administrative Services, Primary
Yolanda R. Serna	City Finance Department, Primary
James Riker	City Community Development, Primary
Marco Cuevas	City Community Development, Alternate
Raymond Chavez	City Administration, Primary
Felix Montoya	City Public Works, Alternate
Estella Saucedo	City Administration, Alternate
Maria Carrillo	City Public Works, Alternate
Jesse Barreras	Pico Water District
Joe D. Basulto	Pico Water District
Carlos Jimenez	El Rancho Unified School District
Representatives	Los Angeles County Fire Department
Representative	Los Angeles County Sheriff's Department
Janice Rogala	Dimensions, Consultant

Hazard Mitigation Planning Committee By-laws

1. Members shall select a chair and vice-chair.
2. The CITY OF PICO RIVERA 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 PICO RIVERA Planning Team agree to meet monthly to identify hazard priorities and review, identify and implement CITY OF PICO RIVERA hazard mitigation strategy recommendations.
4. Any single Hazard Mitigation Planning Team member may request, at a scheduled meeting, of the CITY OF PICO RIVERA Hazard Mitigation Planning Team as a whole, to request an adoption of, or amendment to the plan or process.
5. The CITY OF PICO RIVERA Hazard Mitigation Planning Team was organized in March 2004, as reflected by the minutes of that meeting, and agreed to meet monthly to identify hazard vulnerabilities and feasible hazard mitigation strategy recommendations.

6. The 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 will identify and bring forward hazard mitigation strategies from existing recommendations contained in plans and documents, and from the input of regional jurisdictions and the input of private citizens and organizations.
8. The CITY OF PICO RIVERA Planning Team will identify constraints to mitigation strategies that affect CITY OF PICO RIVERA's ability, authority and responsibility to implement those strategies.
9. Public Input will be implemented in the following manner through the distribution of questionnaires at public events and at government sites. A notice will be put in the newspaper inviting the public to attend any of the Planning Team meetings and a formal Public Hearing will be held for the adoption of the plan. The results of the survey and public input will be reported in this Plan.

Hazard Mitigation Planning Team Tasks

1. Coordinate hazard mitigation planning tasks and activities with the CITY OF PICO RIVERA Planning Jurisdiction's staff and departments to develop a all-hazards disaster mitigation plan and support the Planning Jurisdictions and their appropriate department's oversight of the planning process.
2. Assist in carrying out the goals and objectives of the CITY OF PICO RIVERA Multi-jurisdictional 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 the Planning Jurisdictions and in proximity to CITY OF PICO RIVERA facilities, and develop a risk exposure analysis for those facilities.
5. Select highest priority and most-desired mitigation recommendations and develop those recommendations for further action by the CITY OF PICO RIVERA. Planning Jurisdictions
6. Review mitigation planning drafts, recommendations and updates.
7. Develop and implement long- and short-term goals.
8. Develop a partnership for this Plan with all phases of the City's Comprehensive Emergency Management Plan, Master Plans and General Plan Safety Element, and the individual Planning Jurisdictions appropriate plans.
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:
 - a. Determine implementation ability and constraints for proposed Hazard Mitigation planning steps and development of strategies
 - b. Bring forward community concerns through private and public input

- c. Identify implementation resources as feasible
- d. Identify lead departments in each Planning Jurisdiction for implementation of strategies
- e. Provide for the update of the Disaster Mitigation Plan on a regularly scheduled basis
- f. Evaluate and carry out mitigation activities
- g. Assist in implementation of funding identification and procurement

Hazard Mitigation Planning Goals

1. Support the priorities of the mandate of the, employees, citizens and the business community.
2. Promote economic development consistent with seismic, floodplain and risk management guidance as developed by the CITY OF PICO RIVERA and the Planning Jurisdictions and their agencies and organizations.
3. Provide for an effective public awareness program for natural and technological hazards present in the Planning Jurisdictions.
4. Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to the Planning Jurisdictions.
5. Promote the recognition of the real value of hazard mitigation to public facilities, public safety and welfare of all citizens of the Planning Jurisdictions.
6. Support the mitigation efforts of local governments, private citizens, non-profit organizations and private businesses throughout.
7. To formulate additional goals for high priority risks.

Hazard Mitigation Planning Objectives

1. Identify mitigation actions to reduce loss of lives and property.
2. Implement mitigation actions to reduce loss of lives and property.
3. Identify mitigation strategies that will allow the Planning Jurisdictions to perform their primary mission and goals.
4. Identify mitigation opportunities for short- and long-range planning considerations.
5. Adopt safe building and zoning codes that support scientific findings of a known risk. This task is ongoing in the City of Pico of Rivera and its Planning Jurisdictions.
6. Identify lead Planning Jurisdiction Departments that have an interest in mitigation of specific hazards.
7. Develop a standard mitigation program utilizing authorities, policies and programs of each Planning Jurisdictions.
8. Organize, train and maintain an ongoing and effective CITY OF PICO RIVERA Hazard Mitigation Planning Team that will facilitate implementation of the CITY OF PICO RIVERA Multi-jurisdictional Mitigation Plan.
9. Review and update other Planning Jurisdiction's programs to identify current and future mitigation goals and objectives in compliance with all county, state and Federal requirements.
10. Gain support of the Planning Jurisdiction's administration for the CITY OF PICO RIVERA Multi-Jurisdictional All-Hazard Mitigation Program implementation.
11. Achieve the overall goal of developing a comprehensive mitigation program with Federal, State, CITY OF PICO RIVERA and the appropriate Planning and local jurisdictions.
12. Support and expand identified hazard mitigation strategies as set forth in CITY OF PICO RIVERA Safety Element of the CITY OF PICO RIVERA General Plan and all other CITY OF PICO RIVERA plans that contain Hazard Mitigation Strategies.
13. Support and expand identified hazard mitigation strategies as set forth in the El Rancho Unified School District's and the Pico Water Department's Plans and goals as they relate to and contain mitigation strategies.

Hazard Mitigation Planning Public Participation

Questionnaires were distributed at special events and placed on City Department counters for the public to pick up, at the School District and at the Pico Water Department counter tops. The questionnaires were available in both Spanish and English. Below are the results of the public Questionnaire campaign. In addition to the questionnaires the public was invited to a Hazard Mitigation Planning meeting.

The following are the results to the questionnaire given to the Planning Jurisdictions public representatives for input to this plan.

Hazardous Mitigation Questionnaire Results

English

Spanish

252

62

How concerned are you about the following hazards that could impact your community?

3=very concerned

2=moderately concerned

1=somewhat concerned

0=not concerned

Hazard	No Answer	0	1	2	3
Biological/Pandemic Diseases	10	29	56	81	131
Dam Failure	13	52	75	85	85
Data/Telecommunications Loss	14	43	62	84	134
Drought	13	65	60	88	77
Earthquakes	5	23	55	76	154
Economic Disruption	11	38	65	90	107
Explosions	11	44	63	84	126
Fire	7	27	44	104	151
Flood	10	60	70	94	73
Hazardous Materials	6	36	52	107	108
Incidents during Special Events	9	42	70	117	73
Radiological Incidences	11	50	65	78	97
Severe Weather	10	59	110	63	50
Sink Holes	8	63	66	98	55
Terrorism	7	34	54	49	164
Transportation(Loss of)	11	47	70	105	80
Transportation Accidents	10	37	60	116	90
Utility Loss	11	40	65	105	94
Utility Substations	16	50	87	110	54
Waste	14	36	61	103	99
Water/Sewer Service Disruption	14	33	69	94	114
Weapons of Mass Destruction	9	48	39	51	157
West Nile	14	30	50	82	133
Winds	17	88	87	74	51

What is the most effective way for you to receive information about how to make your household safer from the hazards listed above?

Billboards	26
Brochures	26
Fire Dept.	8
Internet	37

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Newspaper ads	47
Newspaper stories	57
Mail	104
Public meetings	50
Radio ads	46
Radio news	122
Schools	70
Sheriff's Dept.	28
Television ads	86
Television news	192
Utility bills	32
Other (specify)	
None	1
Awake Mag	1
City Building Dept.	1
E-mail	1
Jobs	1
Profile Newsletter	3

In the following list, rate those activities that you have done

3= have done

2= plan to do

1=not done

0=unable to do

Citizen Response

No Answer 0 1 2 3

Attending meetings or received information on natural disasters or emergency preparedness	11	67	194	46	103
Talked with family members about what to do in case of an emergency or disaster	9	24	98	90	152
Developed a "Household/Family Emergency Plan" in case of an emergency or disaster	11	28	123	121	123
Prepare a "Disaster Supply Kit" (extra food, first aid, water, batteries, etc.)	9	26	164	88	147
In the last year, has anyone in your household been trained in First Aid or CPR?	14	63	160	38	147

Disasters can have a significant impact on a community but planning for these events can help lessen the impact. The following statements will help us determine community priorities for planning for those hazards. Please tell us how important each one is to you:

3= very important

2=moderately important

1=somewhat important

	No Answer	0	1	2	3
Protecting private property	6	18	17	87	312
Protecting critical facilities (hospitals, fire stations)	2	9	3	56	354
Protecting the natural environment	2	7	21	140	254
Protecting historical/cultural landmarks	7	5	46	123	102
Protecting schools	1	5	15	57	137

Protecting and reducing damage to utilities	61	4	11	80	151
Strengthening emergency services (police, fire)	1	5	7	59	239
Promoting cooperation among public agencies, citizens, non-profit organizations, and business	6	7	26	94	168

Input Incorporation

The information acquired from the questionnaires and from the other forms of community input through regional contacts, was painstakingly analyzed and incorporated into the final listing of hazards and their priorities as listed in Section 4. The Committee felt that their list reflected the concerns and priorities of the community and of their neighboring jurisdictions.

Regional Stakeholder Contacts

The City of Pico Rivera sent the following letters to invite regional comments on behalf of the Planning Jurisdictions. The results were telephone calls and agreements with several cities to exchange plans at the end of the process. The cities did not have any input into the Pico Rivera Multi-jurisdictional Plan.

June 2, 2004

The Honorable Owen Newcomer
City of Whittier
13230 Penn Street
Whittier, CA 90602

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Mayor Newcomer:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan (LHMP), required under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. Under this law, local agencies must invite public participation in the preparation of the LHMP.

Per our LHMP consultant, this required public participation includes input from neighboring cities and the County, including the Fire and Sheriff's Departments. Your participation is also important because we share a common border with your City; thus, our two jurisdictions may also share some mutual risks, such as flood, dam failure, transportation accidents, hazardous materials, and other disaster hazards.

Accordingly, we invite your City's input into the Pico Rivera LHMP. Enclosed for your consideration is the list of Disaster Risk priorities that were ranked by the City's LHMP Team and that are being considered for mitigation strategies by the City.

Michael Moore, Acting Deputy Director of Public Works, is the Pico Rivera LHMP Team Chairperson. The Team meets the second Monday of each month at 1:30 p.m. The next meeting will be held on June 14th in our City Council Chambers, located at 6615 Passons Blvd.

Your input would be helpful. If you need additional information, please contact Mr. Moore at (562) 801-4420 or mmoore@pico-rivera.org.

Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

Enclosure

June 2, 2004

The Honorable Gustavo R. Velasco
City of Santa Fe Springs
11710 E. Telegraph Road
Santa Fe Springs, CA 90670

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Mayor Velasco:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan (LHMP), required under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. Under this law, local agencies must invite public participation in the preparation of the LHMP.

Per our LHMP consultant, this required public participation includes input from neighboring cities and the County, including the Fire and Sheriff's Departments. Your participation is also important because we share a common border with your City; thus, our two jurisdictions may also share some mutual risks, such as flood, dam failure, transportation accidents, hazardous materials, and other disaster hazards.

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Your input would be helpful. If you need additional information, please contact Mr. Moore at (562) 801-4420 or mmoore@pico-rivera.org.

Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

Enclosure

June 2, 2004

The Honorable Kirk Cartozian
City of Downey, Downey City Hall
11111 Brookshire Road
Downey, CA 90241

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Mayor Cartozian:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan (LHMP), required under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. Under this law, local agencies must invite public participation in the preparation of the LHMP.

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Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

Enclosure

June 2, 2004

The Honorable Ray Cisneros
City of Commerce
2535 Commerce Way
Commerce, CA 90040

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Mayor Cisneros:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan (LHMP), required under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. Under this law, local agencies must invite public participation in the preparation of the LHMP.

Per our LHMP consultant, this required public participation includes input from neighboring cities and the County, including the Fire and Sheriff's Departments. Your participation is also important because we share a common border with your City; thus, our two jurisdictions may also share some mutual risks, such as flood, dam failure, transportation accidents, hazardous materials, and other disaster hazards.

Accordingly, we invite your City's input into the Pico Rivera LHMP. Enclosed for your consideration is the list of Disaster Risk priorities that were ranked by the City's LHMP Team and that are being considered for mitigation strategies by the City.

Michael Moore, Acting Deputy Director of Public Works, is the Pico Rivera LHMP Team Chairperson. The Team meets the second Monday of each month at 1:30 p.m. The next meeting will be held on June 14th in our City Council Chambers, located at 6615 Passons Blvd.

Your input would be helpful. If you need additional information, please contact Mr. Moore at (562) 801-4420 or mmoore@pico-rivera.org.

Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

Enclosure

June 2, 2004

The Honorable Norma A. Lopez-Reid
City of Montebello
1600 W. Beverly Boulevard
Montebello, CA 90640

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Mayor Lopez-Reid:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan (LHMP), required under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. Under this law, local agencies must invite public participation in the preparation of the LHMP.

Per our LHMP consultant, this required public participation includes input from neighboring cities and the County, including the Fire and Sheriff's Departments. Your participation is also important because we share a common border with your City; thus, our two jurisdictions may also share some mutual risks, such as flood, dam failure, transportation accidents, hazardous materials, and other disaster hazards.

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Michael Moore, Acting Deputy Director of Public Works, is the Pico Rivera LHMP Team Chairperson. The Team meets the second Monday of each month at 1:30 p.m. The next meeting will be held on June 14th in our City Council Chambers, located at 6615 Passons Blvd.

Your input would be helpful. If you need additional information, please contact Mr. Moore at (562) 801-4420 or mmoore@pico-rivera.org.

Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

June 2, 2004

Captain Irma Becerra
Sheriff's Department
County of Los Angeles
6631 Passons Blvd.
Pico Rivera, CA, 90660

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Captain Becerra:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan, under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. These risks (see Enclosure) include: earthquake, dam failure, transportation accidents, hazardous materials, and explosions.

Our Local Hazard Mitigation Planning Team will be considering mitigation strategies that address such risks. Because your agency would be tasked with responding to any disaster occurring in the City of Pico Rivera, your input into our Plan is of crucial importance.

Accordingly, we invite you or your representative to attend the Planning Team's meetings, which will be held the second Monday of each month until September 2004. The next meeting will be held on June 14th in our City Council Chambers, located at 6615 Passons Blvd.

Michael Moore, Acting Deputy Director of Public Works, is the Pico Rivera Hazard Mitigation Planning Team Chairperson. If you need additional information, please contact Mr. Moore at (562) 801-4420 or mmoore@pico-rivera.org.

Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

Enclosure

June 2, 2004

Ed Thacher, Assistant Chief
Fire Department
County of Los Angeles
19030 Pioneer Blvd.
Cerritos, CA 90703

SUBJECT: LOCAL HAZARD MITIGATION PLAN

Dear Chief Thacher:

The City of Pico Rivera is currently preparing a Local Hazard Mitigation Plan, under the 2002 amendment to the Robert Stafford Act (PL 93-288), for reduction of damage from both natural and man-caused risks that can affect our City. These risks (see Enclosure) include: earthquake, dam failure, transportation accidents, hazardous materials, and explosions.

Our Local Hazard Mitigation Planning Team will be considering mitigation strategies that address such risks. Because your agency would be tasked with responding to any disaster occurring in the City of Pico Rivera, your input into our Plan is of crucial importance.

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Michael Moore, Acting Deputy Director of Public Works, is the Pico Rivera Hazard Mitigation Planning Team Chairperson. If you need additional information, please contact Mr. Moore at (562) 801-4420 or mmoore@pico-rivera.org.

Sincerely,

Dennis Courtemarche
City Manager

DC:MA:lg

Enclosure

Section 3 – Demographics and Statistics

History and Introduction to the Planning Jurisdictions

City of Pico Rivera

Pico Rivera is a general law city incorporated on January 29, 1958. The name resulted from the merger of the towns Pico and Rivera. Pico was named after the original landowner, Pio Pico, the last Mexican governor of California. Rivera, was named as such by the Santa Fe Railroad because it lay between the rivers San Gabriel and Rio Hondo.



“The City is well represented by its City Seal. Steeped in tradition the City Seal was designed at the time of Pico Rivera’s incorporation in 1958. The seal is recognized as the official mark and endorsement of the City of Pico Rivera and is used both for “official” Proceedings and ceremonial purposes. While the symbols featured on the seal may at first appear to be random, each was carefully selected for inclusion to represent the many aspects of the community, its people, its heritage and its future.

The overall design emblematically portrays the city’s place in the sun with the golden corona of a sunburst enclosing and highlighting the interior symbols.

In the center of the seal; reflecting the gold of the sun stands the family. The family dominates the seal as it does the City. Our city exists for the people, and the people in turn add life and meaning to other symbols of the community.

Surrounding the family and superimposed on a sky blue background, are the symbols that connect the past with the present and project the family into the future.

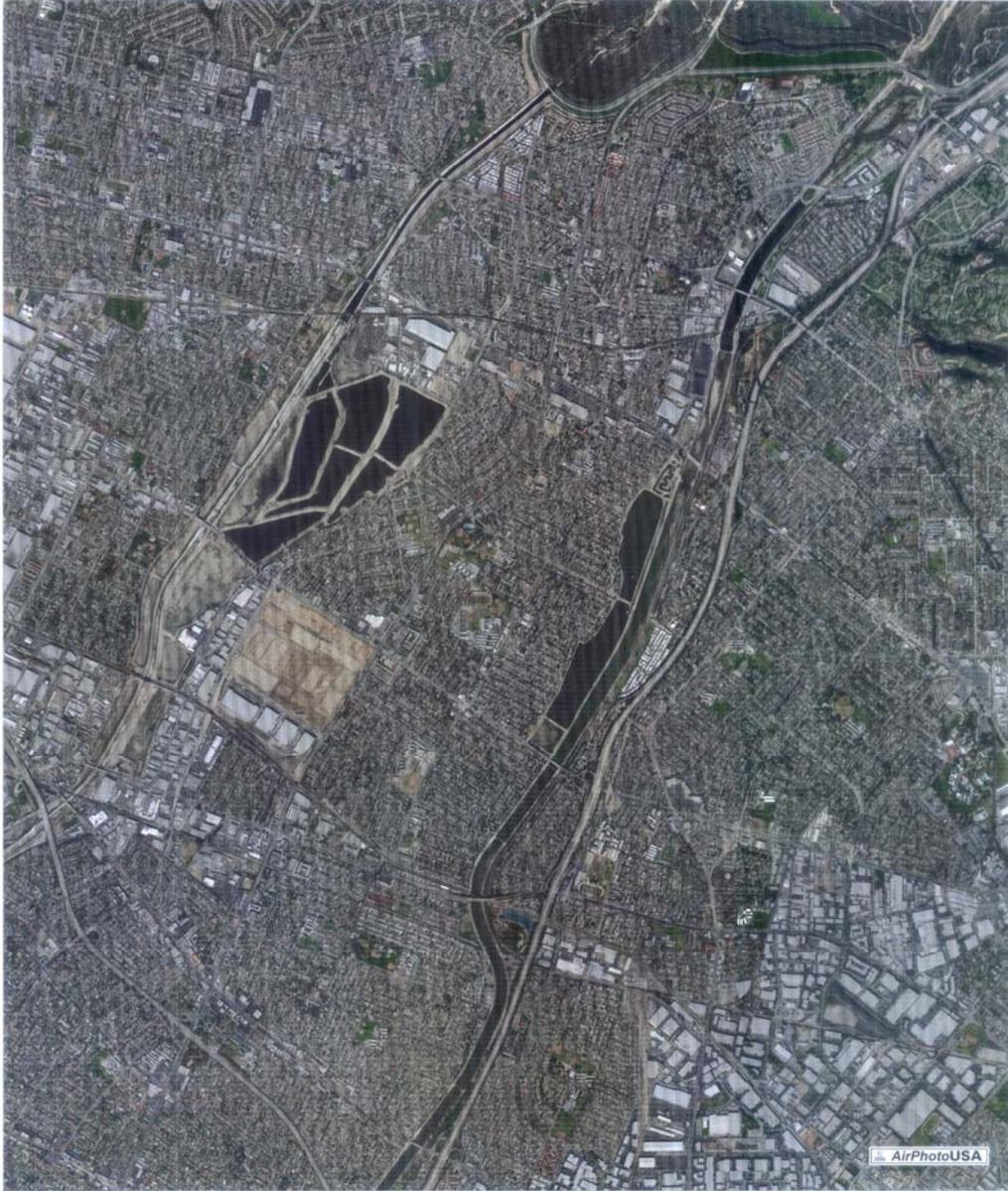
At the top is the crossed sword, pike and helmet of the Conquistador, representing the city’s proud Latino heritage and the community’s first residents.

To the right of the seal are the avocado, orange and walnut reminders of the sprawling acres of citrus, avocado and walnut groves on which the separate communities of Pico and Rivera were born.

As the City prospered and grew, the people built houses and places of worship and agriculture gave way to new industries.

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

Today, Pico Rivera is rich in the resources of urban life and continues to grow. But the people of Pico Rivera, the homes, the industry and the places of worship, remain the foundation of our community and the building blocks of the future.”



CITY OF
PICO RIVERA
CALIFORNIA



Pico Water District

In 1926 the local homeowners with the cooperation with the Chamber of Commerce came together and collectively decided to consolidate the five independent water systems and develop an integrated system which would provide a reliable water supply for residents within the area. Since 1926 substantial development has occurred within the Pico Water District and the number of service connections increase from 243 in 1926 to currently serving approximately 27,000 residents (5300 connections) or slightly more than 30% of the population of Pico Rivera. The Pico Water District is located entirely within the boundaries of the City of Pico Rivera. The District's service area encompasses 1,536 acres. The Pico Water District obtains its entire water supply from local groundwater sources, and has adjudicated rights to 3,624 acre ft. of water from the Central Basin. Two wells are currently off-line because of inadequate groundwater quality. The area served by the Pico Water District is almost entirely developed at this time. Therefore, significant increases in future demand are not anticipated. Redevelopment of some sectors could ultimately increase the water demand to about 3800 acre ft. per year.

The District operates an approximately 200,000 gallon water reservoir for peak needs requirements and at this time is able to meet the District's demands.

El Rancho Unified School District:

The mission of the El Rancho Unified School District, in partnership with the community, is to provide an innovative and challenging learning environment that promotes excellence. The District will prepare students as life-long learners to succeed academically, intellectually, socially, emotionally and culturally.

The El Rancho School District is committed to providing an enriched curriculum with high expectations for all students which emphasizes the skills, concepts and processes necessary for technological and cultural challenges of the 21st century.

The District's education facilities are comprised of the following:

- 12 Elementary Schools
- 3 Middle Schools
- 1 Senior High School
- 1 Continuation High School
- 1 Adult School
- 1 Child Development Center.

The District is located in southern Los Angeles County in the city of Pico Rivera. The schools offer a comprehensive education for approximately 12,000 students. The District provides a variety of educational programs suitable to the needs of a Multi-ethnic and varied Socio-economic community including a large Hispanic enrollment of ninety percent. The District is governed by a five-member Board of Education. Employees number approximately 550 certificated and 570 classified staff.



El Rancho School Building

General Data

Area

The City of Pico Rivera and its Planning Jurisdictions covers 8.30 square miles.(20.7 square kilometers and is populated by 7942.9 persons per square mile. By comparison, Los Angeles County has 2,344.2 persons per square mile. Elevation is 161 feet above sea level

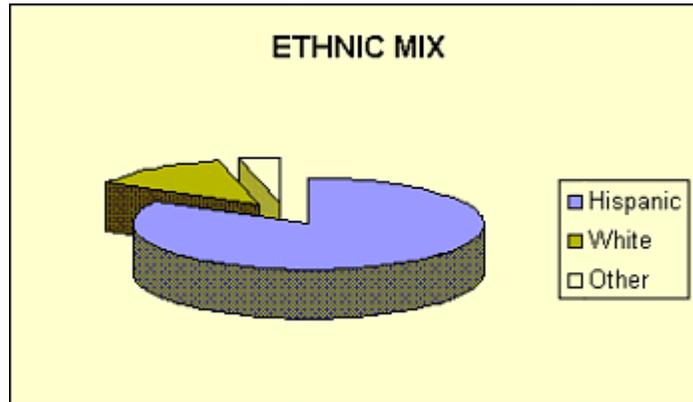
Pico Water District is a county water district located entirely within the boundaries of the City of Pico Rivera. The District's service area encompasses approximately 1,536 acres. The District currently services residential, commercial, industrial and other types of land uses. Pico Water District utilizes groundwater produced from its wells which pump directly from the Montebello Forebay of the Central Basin. The District has pumping rights to 3,624 acre-feet per year in the Central. Pico Water District serves the Durfee Elementary School, North Park Jr. High School, North Ranchito Elementary School, South Ranchito Elementary School, Valencia High School, Rio Vista Elementary School.

Population

The population of Pico Rivera is 66, persons. Population density is above the state average. The number of households is approx 16,500 according to Census 2000 figures.

Ethnicity

Black race population percentage is significantly below the State average. Hispanic race population is significantly above the State average.



Education

Pico Rivera is served by the El Rancho Unified School District:
9333 Loch Lomond Drive
Pico Rivera, California 90660
(562) 942-1500

El Rancho Unified School District is located in Pico Rivera with 18 schools and one development center serving 12,000 students

Public schools in Pico Rivera:

- EL RANCHO HIGH (Students: 3,067; Location: 6501 S. PASSONS BLVD.; Grades: 09 - 12)
- SALAZAR (RUBEN) CONTINUATION (Students: 152; Location: 9515 HANEY ST.; Grades: 09 - 12)
- RIVERA MIDDLE (Students: 1,044; Location: 7200 CITRONELL AVE.; Grades: 06 - 08)
- NORTH PARK MIDDLE (Students: 984; Location: 4450 S. DURFEE AVE.; Grades: 06 - 08)
- BURKE (OSBURN) MIDDLE (Students: 892; Location: 8101 ORANGE AVE.; Grades: 06 - 08)
- SOUTH RANCHITO ELEMENTARY (Students: 702; Location: 5241 S. PASSONS BLVD.; Grades: KG - 05)
- MELLER (MARY E.) ELEMENTARY (Students: 603; Location: 9115 E. BALFOUR ST.; Grades: KG - 05)
- NORTH RANCHITO ELEMENTARY (Students: 588; Location: 8837 E. OLYMPIC BLVD.; Grades: KG - 05)
- RIVERA ELEMENTARY (Students: 574; Location: 7250 CITRONELL ST.; Grades: KG - 05)
- MAGEE (LAWRENCE T.) ELEMENTARY (Students: 574; Location: 8200 SERAPIS AVE.; Grades: KG - 05)
- BIRNEY (ALICE M.) ELEMENTARY (Students: 569; Location: 8501 ORANGE AVE.; Grades: KG - 05)
- RIO VISTA ELEMENTARY (Students: 524; Location: 8809 COFFMAN-PICO ROAD; Grades: KG - 05)
- *Private primary/middle schools in Pico Rivera:*
- ST HILARY ELEMENTARY SCHOOL (Students: 372; Location: 5401 S CITRONELL AVE; Grades: KG - 8)

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
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- ST MARIANNE SCHOOL (Students: 289; Location: 7911 BUHMAN AVENUE; Grades: KG - 8)
- CUMORAH JR ACADEMY (Students: 73; Location: 4561 DURFEE AVE; Grades: PK - KG)

Media

Pico Rivera is served by News weekly newspaper, several daily newspapers, and the following broadcast media:

Strongest AM radio stations in Pico Rivera:

- KLAC (570 AM; 50 kW; LOS ANGELES, CA; Owner: AMFM RADIO LICENSES, L.L.C.)
- KFI (640 AM; 50 kW; LOS ANGELES, CA; Owner: CAPSTAR TX LIMITED PARTNERSHIP)
- KTNQ (1020 AM; 50 kW; LOS ANGELES, CA; Owner: KTNQ-AM LICENSE CORP.)
- KXTA (1150 AM; 50 kW; LOS ANGELES, CA; Owner: CITICASTERS LICENSES, L.P.)
- KFWB (980 AM; 50 kW; LOS ANGELES, CA; Owner: INFINITY BROADCASTING OPERATIONS, INC.)
- KMPC (1540 AM; 50 kW; LOS ANGELES, CA; Owner: ROSE CITY RADIO CORPORATION)
- KDIS (1110 AM; 50 kW; PASADENA, CA; Owner: ABC,INC.)
- KXMX (1190 AM; 25 kW; ANAHEIM, CA; Owner: NEW INSPIRATION BROADCASTING COMPANY)
- KBLA (1580 AM; 50 kW; SANTA MONICA, CA)
- KNX (1070 AM; 50 kW; LOS ANGELES, CA; Owner: INFINITY BROADCASTING OPERATIONS, INC.)
- KRLA (870 AM; 20 kW; GLENDALE, CA; Owner: NEW INSPIRATION BROADCASTING COMPANY)
- KSPN (710 AM; 50 kW; LOS ANGELES, CA; Owner: KABC-AM RADIO, INC.)
- KPLS (830 AM; 50 kW; ORANGE, CA; Owner: CRN LICENSES, LLC)
- *Strongest FM radio stations in Pico Rivera:*
- KPWR (105.9 FM; LOS ANGELES, CA; Owner: EMMIS RADIO LICENSE CORPORATION)
- KCBS-FM (93.1 FM; LOS ANGELES, CA; Owner: INFINITY BROADCASTING OPERATIONS, INC.)
- KSCA (101.9 FM; GLENDALE, CA; Owner: HBC LICENSE CORPORATION)
- KUSC (91.5 FM; LOS ANGELES, CA; Owner: UNIVERSITY OF SOUTHERN CALIFORNIA)
- KZLA-FM (93.9 FM; LOS ANGELES, CA; Owner: EMMIS RADIO LICENSE CORPORATION)
- KLOS (95.5 FM; LOS ANGELES, CA; Owner: KLOS-FM RADIO, INC.)
- KOST (103.5 FM; LOS ANGELES, CA; Owner: CAPSTAR TX LIMITED PARTNERSHIP)
- K212FA (90.3 FM; TEMPLE CITY, CA; Owner: EDUCATIONAL MEDIA FOUNDATION)
- KKBT (100.3 FM; LOS ANGELES, CA; Owner: RADIO ONE LICENSES, LLC)
- KLSX (97.1 FM; LOS ANGELES, CA; Owner: INFINITY BROADCASTING OPERATIONS, INC.)
- KIIS-FM (102.7 FM; LOS ANGELES, CA; Owner: CITICASTERS LICENSES, L.P.)
- KLVE (107.5 FM; LOS ANGELES, CA; Owner: KLVE-FM LICENSE CORP.)
- KPCC (89.3 FM; PASADENA, CA; Owner: PASADENA AREA COMMUNITY COLLEGE DISTRICT)
- KKLA-FM (99.5 FM; LOS ANGELES, CA; Owner: NEW INSPIRATION BROADCASTING CO., INC.)
- KHHT (92.3 FM; LOS ANGELES, CA; Owner: AMFM RADIO LICENSES, L.L.C.)
- KBIG-FM (104.3 FM; LOS ANGELES, CA; Owner: AMFM RADIO LICENSES, L.L.C.)
- KTWV (94.7 FM; LOS ANGELES, CA; Owner: INFINITY BROADCASTING OPERATIONS, INC.)
- KMZT-FM (105.1 FM; LOS ANGELES, CA; Owner: MOUNT WILSON FM BROADCASTERS, INC.)
- KPFK (90.7 FM; LOS ANGELES, CA; Owner: PACIFICA FOUNDATION, INC)
- K216EM (91.1 FM; ARCADIA, CA; Owner: LIFE ON THE WAY COMMUNICATIONS, INC.)
- *TV broadcast stations around Pico Rivera:*
- KCBS-TV (Channel 2; LOS ANGELES, CA; Owner: CBS BROADCASTING INC.)
- KTRO-LP (Channel 50; LANCASTER, CA; Owner: ROBERT D. ADELMAN)
- KTLA-TV (Channel 5; LOS ANGELES, CA; Owner: KTLA INC.)
- KABC-TV (Channel 7; LOS ANGELES, CA; Owner: ABC HOLDING COMPANY, INC.)
- KCAL-TV (Channel 9; LOS ANGELES, CA; Owner: VIACOM TELEVISION STATIONS GROUP OF LOS ANGELES LLC)

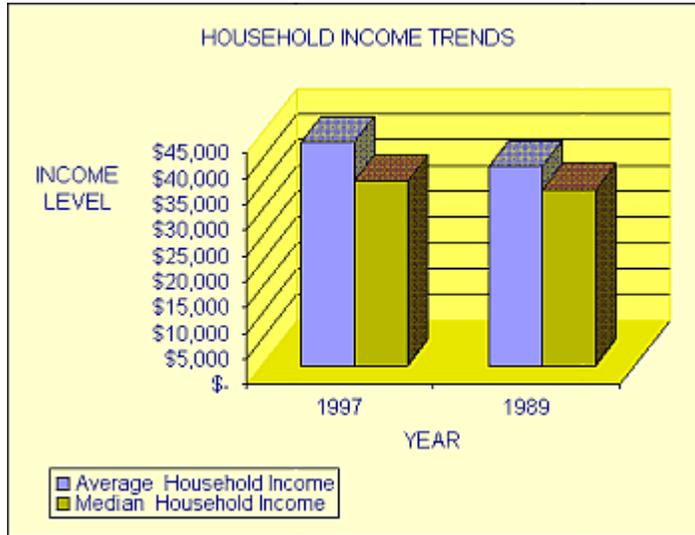
- KNBC (Channel 4; LOS ANGELES, CA; Owner: NBC SUBSIDIARY (KNBC-TV), INC.)
- KMEX-TV (Channel 34; LOS ANGELES, CA; Owner: KMEX LICENSE PARTNERSHIP, G.P.)
- KAZA-TV (Channel 54; AVALON, CA; Owner: PAPPAS SOUTHERN CALIFORNIA LICENSE LLC)
- KDOC-TV (Channel 56; ANAHEIM, CA; Owner: GOLDEN ORANGE BROADCASTING CO., INC.)
- KOCE-TV (Channel 50; HUNTINGTON BEACH, CA; Owner: BD. OF TRUSTEES, COAST COMMUNITY COLLEGE DIST.)
- KCET (Channel 28; LOS ANGELES, CA; Owner: COMMUNITY TELEVISION OF SOUTHERN CALIFORNIA)
- KSMV-LP (Channel 33; LOS ANGELES, CA; Owner: KJLA, LLC)
- KFTR (Channel 46; ONTARIO, CA; Owner: TELEFUTURA LOS ANGELES LLC)
- KTTV (Channel 11; LOS ANGELES, CA; Owner: FOX TELEVISION STATIONS, INC.)
- KWHY-TV (Channel 22; LOS ANGELES, CA; Owner: TELEMUNDO OF LOS ANGELES LICENSE CORPORATION)
- KVEA (Channel 52; CORONA, CA; Owner: ESTRELLA LICENSE CORPORATION)
- KCOP-TV (Channel 13; LOS ANGELES, CA; Owner: FOX TELEVISION STATIONS, INC.)
- KRCA (Channel 62; RIVERSIDE, CA; Owner: KRCA LICENSE CORP.)
- KPXN (Channel 30; SAN BERNARDINO, CA; Owner: PAXSON LOS ANGELES LICENSE, INC.)

Housing

Pico Rivera has 16,473 housing units of which 70.1 percent are owner occupied. The median value of a housing unit is \$320,000.

Income

The average income in Pico Rivera is \$52,064. Industries providing employment are Manufacturing (21.2%), Educational, health and social services (17%), retail trade (11.8%).



Structure of Government

Administrative Body

The City of Pico Rivera is governed by a council-manager form of government. Council members are elected for four year terms and a Mayor, who serves for one year, is selected from the group of five council members. The council appoints a city manager who carries out policy, as well as supervising department directors who oversee the City's various programs and projects.

Elected Officials

The City has five council members which are elected to four year terms.

Contracted Services

Law enforcement and safety services are contracted with the County of Los Angeles Sheriff's Department and fire services are provided by the Los Angeles County Fire Department with three stations serving the City. The Los Angeles County Health Department serves the City as well as the Los Angeles County Library system.

Business Continuity

In the event of an emergency all of the cities departments would be able to assist in the emergency. The City contracts its emergency response capability and the continuity of day to day services would continue after the initial emergency response phase of the disaster was over. The assessment and recovery phase of the disaster could occur with essential City services as needed.

City of Pico Rivera Departments & Responsibilities

The following is a brief description of City Departments and their responsibilities.

Administration

City Manager

City Manager Dennis Courtemarche is the administrative head of the City. Appointed by the City Council, he oversees the day-to-day operations of the City government, enforces City laws and prepares and manages the City budget. He advises the City Council on matters that affect all aspects of City operations and recommends appropriate action that may involve legislation, fiscal matters, capital improvement and other City policies. He appoints all department heads and directly oversees their operations. other City policies. He appoints all department heads and directly oversees their operations.

Assistant City Manager

Debbie Lopez is Pico Rivera's Assistant City Manager. In this capacity, she provides able support to the City Manager in managing the day-to-day operations of the City. She is tasked with coordinating the City's economic development efforts through redevelopment, business outreach and capital project management. She directly supervises the City's Communications, Marketing and Business Assistance Program efforts. She also acts as the Assistant Executive Director of the Pico Rivera Redevelopment Agency.

Assistant to the City Manager

Raphael Guillen, Assistant to the City Manager, assists both the City Manager and Assistant City Manager. He supervises the Human Resources Division, which handles employee recruitment, benefits and training. He also acts as project manager of several redevelopment and special City projects.

Community Promotion

Community Promotion is the City's award-winning information, marketing and business liaison department. Under the leadership of Darlene Harris, Assistant to the City Manager, this multi-functional department has a wide range of responsibilities relating to business, community and media relations.

The Public Information Division handles all media relations on behalf of the City, including the design and production of the City's monthly newsletter, The Profile, special publications, informational booklets, brochures and marketing materials. In addition, Community Promotion manages CTV3, the City's cable television channel, producing regular programming featuring local news, educational presentations, special videos and public service announcements.

Business owners and entrepreneurs obtain helpful information and assistance from the Business Outreach Division. This support ranges from identifying available sites for new or relocating businesses, to the identification of potential new markets or resources to improve sales and productivity through partnerships with the World Trade Center, Small Business Development Center and the California Manufacturing Technology Center. Working closely with the Pico Rivera Chamber of Commerce, staff provides businesses with a full range of programs and services, and works to solve business issues.

The Neighborhood Outreach Division encourages active participation of residents in City programs and events and is involved in the development of innovative community cooperatives to improve communication between residents and City Hall. Staff works closely with the Sheriff's Department and local groups to develop and maintain neighborhood groups and associations and hosts regular community meetings to address current issues and concerns.

Community Promotion also develops and organizes many special events and community enhancement programs, including an Annual Business Appreciation function with City officials, the City Manager and senior staff in attendance. The department spearheaded the crafting of an innovative and comprehensive Graffiti Abatement Program that is being replicated in surrounding cities.

Community Promotion has consistently been recognized for its outstanding achievements with many awards of excellence from local and national professional organizations.

Human Resources

Oversees classification and compensation plan and special programs such as Workforce Enrichment, Youth in Government and Career Preparation and Opportunities Program (CPOP). The division also conducts employee orientation for newly hired staff.

Administrative Services/City Clerk's Office

The Administrative Services/City Clerk's Office oversees the operations of several functions of City government. Administrative Services is responsible for employment relations, purchasing, telecommunications, parking enforcement, crossing guards, fleet maintenance, risk management and safety, and a range of special programs. The department is also responsible for the oversight of several service contracts including citation processing and appeal services and custodial and plant maintenance services.

The business of the City Clerk's office is the oldest in municipal government. The City Clerk's Office administers the City's municipal elections, prepares, coordinates and distributes the meeting agenda for the City Council and other agencies and commissions. The City Clerk's office is the official repository of City documents.

Agenda for the City Council, Redevelopment Agency, the Water Authority and the Housing Authority are made available by this office to the public prior to their scheduled meetings. City Clerk Office staff also prepare the minutes of all City Council meetings. You may peruse the City Council meeting agenda and approved minutes of meetings online or by visiting City Hall. For a nominal fee, copies of these documents may also be requested. For your convenience, Pico Rivera's Municipal Code is available online.

Christine Schaefer holds the dual responsibilities of Director of Administrative Services and City Clerk.

Purchasing Division

Purchasing is an integral part of the Administrative Services Department. It serves the needs of the various City departments, the Pico Rivera Municipal Golf Course, Senior Center and the City's nine parks. It administers the City's formal bid processes, establishes contracts for products and services and maintains quality vendor relationships. In addition, the Purchasing Department is responsible for the maintenance of the City's fleet of vehicles and equipment and the City's telecommunications systems.

Parking Enforcement

The City's Parking Enforcement Program is charged with ensuring that streets are kept clear for the street sweeper and with enforcing parking and registration provisions under the California Vehicle Code and the Pico Rivera Municipal Code. Additional areas of responsibility include towing abandoned and illegally parked vehicles, investigating complaints and collecting and reporting safety related data.

Parking Tickets

City parking enforcement staff and Sheriff's officers issue parking tickets. Tickets issued by the Sheriff's Department are large and yellow in color; City tickets are white and resemble a cash register receipt. Both contain identical payment due date information, a correspondence address and a toll-free telephone number.

Illegally parked vehicles may be cited for a variety of reasons. These include street sweeping and red curb violations, parking in disabled spaces, display of expired registration tabs and missing plates, to name just a few. In 2003, City parking enforcement staff issued 3,000 vehicle warnings and 15,500 citations.

Crossing Guards

Crossing guards primarily assist elementary school children with safe passage across busy streets. They are stationed near public elementary schools throughout the city. In 2001, crossing guards helped nearly 317,000 pedestrians and schoolchildren at school crossings.

Crossing guards also provide public information and report safety-related problems impacting pedestrian safety. This includes illegally parked vehicles and absence of proper signs and curb-markings, to name a few.

Those who are interested in applying to be a Crossing Guard may download and complete an application form which is online or by visiting City Hall. Prior experience, either paid or volunteer, is desirable but not required. Applicants must pass an English reading test with a score of 70% or more and must be willing to work variable shifts throughout the year including summer school sessions.

Risk Management & Safety

Risk Management administers Employee Relations, Workers' Compensation and General Liability issues, Emergency Preparedness; Special Programs, such as the Summer Employment Opportunities Program (SEOP) and "Take Our Daughters To Work Day."

In simplest terms, the goal of the risk management division is to minimize the adverse effects of accidental and business losses at reasonable cost. An integral component of risk management is safety and emergency preparedness.

In recent years, the City of Pico Rivera has placed an increased emphasis on emergency preparedness by participating and conducting annual functional exercises designed to simulate emergency situations. Annual functional exercises conducted at the City's Emergency Operations Center (EOC) provide an opportunity for all members of the disaster response team to practice and test the City's Emergency Operations Plan and help identify and correct any problems before a real emergency occurs. The response team is comprised of key City, Fire, Sheriff and Health Departments, the El Rancho Unified School District, Pico Water District and the American Red Cross staff.

In early 2004, the 26 Neighborhood Watch participants completed CERT (Community/Citizen Emergency Response Team) aimed at preparing residents to be more self-reliant in response to a disaster/emergency situation.

For information on what you can do to be better prepared for a disaster or emergency, visit the L.A. County Emergency Survival Program's website.

Financial Management

The Financial Management Department is responsible for all the City's financial record keeping. Its Accounting Division takes care of all the City's financial records, processes the payroll of all employees and handles payment of all its obligations. Its Treasury Division is tasked with the safekeeping and investment of all City monies, while the Revenue Division handles all transactions related to business licenses, dog licenses, water billing and accounts receivables.

Marcie Medina holds the dual responsibility of department director and City Treasurer.

Accounting Division

The Accounting Division is responsible for the City's accounts payable, grant accounting, payroll, information technology, central duplicating and general accounting functions. It prepares Pico Rivera's Comprehensive Annual Financial Report and compiles its annual budget. In addition to assisting other departments at City Hall, the Accounting Division also takes care of the accounting needs of the Pico Rivera Redevelopment Agency and Housing Agency.

The Accounting Division has received state and national recognition for excellence in the preparation of the City's Comprehensive Annual Financial Report from the Government Finance Officers Association of the United States and Canada and the California Society of Municipal Finance Officers, for eight and 12 consecutive years, respectively.

Treasury

The safeguarding and investing of all City and Agency monies is the responsibility of the Treasury Division. The City of Pico Rivera, together with the Redevelopment and Housing Agencies, have a total operating cash of about \$25 million at any given time. It spends between \$25 and \$30 million per year to operate and implement programs and projects that improve the quality of life and services in the City. To do this, Treasury staff must practice the delicate task of ensuring these funds are invested where they will generate the most returns with the minimum of risks.

Revenue Division

The Revenue Division handles all applications for business licenses and takes care of processing and sending out the City's Water Division statements of accounts to all its customers. It also takes care of processing animal licenses and conducting animal clinics annually.

The Revenue Division processes approximately 3,100 business licenses per year. The Pico Rivera Municipal Code provides that no person or entity may start any business, profession or trade without first securing a business license from the City.

The City issues three types of business licenses: commercial/industrial business license, a residential/home-based business license and an out-of-town business license.

Business licenses must be renewed annually. Business license renewal forms are mailed each year and must be paid by the expiration date to avoid penalties.

Animal Licensing

A resident who owns a dog must secure a license for his or her pet from the City within 30 days after it is brought into the City or reaches four months of age. Application for a license may be obtained from City Hall during normal business hours. Dog licenses must be renewed each year by July 31. The licensing period is from July 1 through June 30.

To obtain a dog license, dog owners must furnish the following information:

- Owner's name, address, and telephone number
- Proof of rabies vaccination
- Dog's breed, approximate age, color and sex
- Information if the dog has been altered. This requires proof from a veterinarian

Animal License and Vaccination Violations

If your pet requires licensing or vaccination and you have not satisfied necessary requirements, a ticket will be issued by the Whittier Municipal Court for failure to have a current animal license or proof of rabies vaccination.

Community Development

The Community Development Department, is entrusted with ensuring orderly development growth, property maintenance, compliance with zoning and building regulations and improvement programs for the community. The department is divided into three major areas of responsibility: Planning, Neighborhood and Building Services.

1. Planning Division
2. Building Division
3. Neighborhood Services Division

Housing Services

The Housing Services Department implements the City's various housing assistance programs. These include programs that offer qualified first-time home buyers help with down payments and closing costs, home improvement rebates and grants, rental (Section 8) assistance and a Paint-Up/Fix-Up Program, among others. Additional housing assistance Programs are:

- Housing Assistance Programs
- Housing Rehabilitation
- Single Family Residential Rehabilitation
- Mortgage Credit Certificates
- Rental Assistance
- Affordable New Housing
- Lease-Purchase Home Ownership Assistance Program
- Housing Replacement
- Fair Housing
- Homelessness
- Housing Program Policies
- Single Family Rehabilitation Loan
- Grant Program
- Rebate Program
- Paint-Up/Fix-Up Program
- Social Services

Public Works

The Public Works Department, currently under the leadership of Director, Gail Farber, is responsible for the engineering, maintenance and operation of the City's infrastructure, including streets, sidewalks, curbs, gutters, parkways, medians, alleys, public parking lots, traffic signals, and traffic markings. Additional responsibilities include Facility Maintenance, Project Management, Street Sweeping, Trash and Recycling Services, and Water System Maintenance for the engineering, maintenance and operation of the City's infrastructure, including streets, sidewalks, curbs, gutters, parkways, medians, alleys, public parking lots, traffic signals, and traffic markings. Additional responsibilities include Facility Maintenance, Project Management, Street Sweeping, Trash and Recycling Services, and Water System Maintenance

Five divisions comprise the department, each tasked to implement its mandated functions. These are:

Administrative Services Division

The Administrative Services office oversees the entire Public Works Department, which includes 76 employees and a budget of approximately \$19 million dollars. Under the supervision of the Director of Public Works, the Administration Section is responsible for budget analysis and control, special projects, legislative review, operational analyses, and the coordination of major capital projects. The division plays a major role in emergency preparedness and also oversees the City's Stormwater Management and contracted Street Sweeping, Traffic Signal Maintenance, and Waste Management services.

Gail Farber, Director of Public Works

Administrative Services is located in City Hall at 6615 Passons Blvd., and can be reached at (562) 801-4415.

Engineering Division

Engineering provides engineering design services, development and maintenance of maps and records, special assessment district administration and all other basic engineering inspections and services. The division is responsible for the approval and inspection of all public improvements-- both privately and publicly funded-- to confirm compliance with City and State standards through the development review process. It also maintains and updates the City's Geographic Information System (GIS). In 2003, City engineers and staff provided design, checking and/or construction inspection services for Capital Improvement projects with a combined total value of over \$8.7 million and were instrumental in the timely completion of the new Pico Rivera Towne Center.

Juan Balanay, Assistant City Engineer

Romeo Ligason, Assistant City Engineer

Street Maintenance Division

The Street Maintenance Division ensures the safe and efficient movement of vehicular and pedestrian traffic by keeping the City's public infrastructure in good condition. Street maintenance crews take care of 137 miles of City streets and alleyways, more than six miles of street medians and service road islands and 18,660 City trees.

Street maintenance responsibilities include:

- Alley cleaning and weed abatement
- Asphalt Maintenance – roadway repairs and patching of potholes
- General Construction - general construction and miscellaneous concrete repair projects.
- Landscape and irrigation maintenance – maintenance of more than six miles of street medians and parkway areas.
- Sidewalk Maintenance – repair and maintenance of sidewalks, curbs, and gutters.
- Storm Drain Maintenance – inspection, cleaning and maintenance of storm drain systems.
- Traffic Markings and Signage –maintenance of roadway markings, street striping, public parking stalls, crosswalks, curb markings, and all street signage.
- Tree Maintenance – is responsible for planting, trimming, and overall care of street trees and trees in city parks.

The Street Maintenance Division also implements the City's graffiti abatement efforts. To report graffiti that are visible from public streets, call the Any time Line (801-CITY ext. 2024). You may also fill out a Service Request form or call the Public Works Department.

Art Macias, Street Maintenance Supervisor

Eric Johnson, Street Maintenance Supervisor

The Street Maintenance Division is located at the City of Pico Rivera Corporate Yard Facility, 9633 Beverly Road., and can be reached at (562) 801-4466 or 801-4464.

Water Division

Pico Rivera Water Authority (PRWA) was formed on May 6, 1999. Ground water is the PRWA's main water supply source. Due to naturally occurring recharged, enhanced by recharging efforts of the County, groundwater supplies have generally been sufficient to meet the needs of the city's residents. At times, the City has leased water rights to supplement its needs. During the City's history it has never resorted to actual water rationing, even during a statewide drought. Although groundwater supplies are usually capable of meeting annual demand, the PRWA purchases imported water from other agencies to meet emergencies. For example, confronted with a sudden lack of pressure in the northern part of the City, and faced with pumping water uphill, the PRWA purchase water from the City of Whittier. This water can be directed to the northern part of the City through an existing tie-in with Whittier.(City of Pico Rivera 2000 Urban Water Management Plan)

The Water Division provides drinking water to approximately 9,200 water service connections. The water system is made up of more than 90 miles of pipeline, with 10 active wells, 10 pump stations, 9 booster pumps, 3 reservoirs, and 875 fire hydrants. The system is capable of providing more than 12,500 gallons of water per minute. The staff of the Water Division is responsible for the distribution and treatment of water to its customers. They test the water on a weekly basis and work hard to ensure that the quality of water piped to water service connections meets or exceeds State and Federal standards. Water within the system is fluoridated.

In 2000, Pico Rivera submitted samples of the water it supplies to its customers during the prestigious annual Berkeley Springs International Water Tasting Awards, the largest water tasting competition in the world. As a testament to the quality of its water, Pico Rivera won the bronze medal as the best tasting tap water in the world.

Parks and Recreation Division

Led by Cindy-Lu Gans, this department supervises nine parks & playgrounds, a swimming facility and a nine-hole executive golf course. It is also tasked with implementing recreation, health and educational programs for all members of the community. It operates a state-of-the art Senior Center where it conducts programs focused on enriching the lives of our senior residents and a Centre for the Arts where art exhibits and classes are conducted year round.

The Department of Parks and Recreation operates and maintains parks and recreational facilities for the enjoyment of its residents, workers and visitors. Over 120 developed acres are home to a variety of recreational facilities, with everything from playgrounds to an Olympic size pool.

The Department operates nine parks containing 18 athletic fields, two gymnasiums and two community centers. In addition to building, maintaining and operating these facilities, the Department also offers year-round instructional classes, special or seasonal events, sports leagues, workshops, recreational programs and community celebrations for all ages.

In 2001, the City approved a park master plan involving its five main parks. A facility master plan is currently being developed.

The Department aims to strengthen community by providing experiences that promote healthy lifestyles, connect families and neighbors, encourage lifelong learning and celebrate life. It offers recreation programs annually for individuals and families in a safe, friendly environment. These programs also make Pico Rivera an attractive and desirable place to live, work, play and visit. Programs like "Hope in Action" provide positive choices for the youth.

Business Services

The City is meeting the growing needs of its business community through the development of unique business attraction, expansion and retention programs. In partnership with organizations experienced on international trade, business development and efficiency systems, Pico Rivera is thoroughly committed to providing valuable assistance to local businesses.

Pico Rivera is also pursuing a "Foreign Trade Zone" designation, which will facilitate business opportunities for the region's growing overseas trade industry. With an active City Council, a thriving business community and committed City staff, Pico Rivera is ready to face the challenges of the future.

Capital Improvement Program

Pico Rivera continues to implement its aggressive capital improvement program that is aimed at enhancing the City landscape and quality of life for its residents and businesses. Completed projects include improvements on several City streets, road medians and City parks. More than 2,000 trees were planted in targeted areas of the City. Phase I of the Rio Hondo Park improvement project was completed, which included an access road along the southerly boundary of the Park, field renovation, construction of new walkways and play areas, installation of new bathrooms and equipment and improvement of area lighting and irrigation systems. The facade improvement of several buildings along the west end of Whittier Boulevard was also completed. Improvements along the east end of Whittier Boulevard are now underway.

Projects That Were Completed in 2000 and 2001

Rio Hondo Park rehabilitation, Phase I

- Whittier Boulevard facade improvement, from Grape Street to west City limits
- Design and construction of miscellaneous water system improvements, Phase X

Street Improvements:

- Serapis Avenue, from Slauson Avenue to Telegraph Road
- Goodbee Street, from Passons Boulevard to Pico Vista Road
- Southerly extension of San Gabriel River Parkway from Beverly Road to Beverly Boulevard
- Coffman & Pico Road, between Mines Avenue and Maris Street
- Cosgrove Street, from Passons Boulevard to Citronell Avenue
- Sunglow Street, from Passons Boulevard to Pico Vista Road
- Van Norman Road, from Whittier Boulevard to 500 feet southerly thereat
- Washington Boulevard & Passons Boulevard, intersection acceleration lane
- Cord Avenue, from Underwood Street to north end of Cord Avenue
- Pico Vista Road from Dickey Street to Washington Boulevard
- Passons Boulevard, from Whittier Boulevard to Jackson Street
- Modification of the Durfee Avenue/Beverly Boulevard intersection
- Shade Lane, from Passons Boulevard to Orange Avenue
- Durfee Avenue railroad crossing improvement
- Elnora Street from Garrick Avenue to 250 feet west of Ivy Street

Alley Improvements:

- Phaeton Avenue, from Washington Boulevard to Carron Drive
- North Mines Avenue, from Calico Avenue to Manzanar Avenue
- North of Washington Boulevard, from Phaeton Avenue to Bollenbacher Avenue

- East and West of Paramount Boulevard, from Telegraph Road to 140 feet north of Maxine Street
- West of Paramount Boulevard, from north to south Manzanar Avenue
- Landscape Median Renovations
- Washington Boulevard from Passons to east City limits
- Whittier Boulevard from Rosemead Boulevard to Paramount Boulevard
- San Gabriel River Parkway from Beverly Boulevard to Rose Hills Road
- Washington Boulevard from Passons Boulevard to east City limits (between frontage roads and main road, north and south side)

City wide street tree planting and trimming

Installation of overhead street name signs at major intersections

Improvements/renovations of public buildings, parks, parking lots

Upgrade/maintenance of City entrance signs/monuments

Installation of handicapped ramps at various City locations

Upgrade of supervision control and data acquisition system

Pico Rivera Redevelopment Agency

The Pico Rivera Redevelopment Agency plays an active role in the revitalization of the community. Dedicated to showcasing the many positive aspects of living and doing business in the community, the Redevelopment Agency works toward improving blighted areas within the City. Recent projects include the following:

1. New single-family homes at Paramount and Mines.
2. Braemar Traditions development of 113 single-family homes.
3. Façade improvements for several businesses and churches at west end of Whittier Boulevard.
4. At the east end of the City, a road improvement project extended San Gabriel River Parkway from Beverly Boulevard to Beverly Road.
5. Pico Rivera Business Center, a 40-acre light industrial development.
6. Pico Rivera Commerce Center, a 100-acre development for light industries, manufacturing and warehousing.
7. Pico Rivera Towne Center, a 60-acre open air shopping center.
8. Krikorian Premiere Theater Complex, a \$22 million, 12-acre shopping center. (Construction to commence in first quarter of 2004.
9. New homes south of Rio Hondo Park. (Completed in March 2004)

Housing Assistance Programs

From installing new insulated windows and providing rental subsidies, to providing opportunities to low- to moderate income families the chance to own their homes, the City of Pico Rivera has a myriad of housing assistance programs designed to help local families improve their standard of living.

The following summarizes the key housing assistance programs implemented by the City of Pico Rivera. For more information, contact the Housing Services Department.

Housing Rehabilitation\

The City receives approximately \$1.3 million per year in federal community development block grant funds each year. A significant portion of these funds is used to assist homeowners in three ways:

Home Improvement Rebates: Provides a 50% reimbursement to low and moderate income homeowners for a wide variety of home improvements up to \$2,000 per project.

Home Improvement Grants: Provides a one-time only grant of up to \$3,000 to very low-income homeowners to make critical health and safety-related improvements. For more information, [click here](#).

Paint-up/Fix-up: City personnel provide certain home improvement services free of charge to low-income senior citizens and handicapped homeowners. Services include painting/restuccoing exteriors; installation of dead bolt locks, smoke alarms, hot water heater blankets, earthquake straps and window reglazing and weather-stripping.

Single Family Residential Rehabilitation

The Single Family Residential Rehabilitation Loan Program provides three percent (3%) simple interest, deferred payment loans to seniors, persons with disability and families of low and moderate income who own and occupy their homes and need financial assistance to make home repairs and improvements. Backed by Federal funds, the loan is secured by the property Deed of Trust. Payment is typically deferred until the sale, transfer of ownership, refinancing of the home or upon reaching the loan's 30th year.

Rental Assistance

Rental subsidies are provided to families earning less than 50% of the county's annual median income under the Rental Assistance Program, more popularly referred to as the "**Section 8 Program**." The City's Housing Assistance Agency currently helps about 400 families pay \$3 million in rent each year. Due to the existence of a long waiting list, applications to this program are not being accepted.

Eligibility Requirements

Applicants must be residents of Pico Rivera with income levels as follows:

Family Size Maximum Family Income:

1. Person \$20850
2. Person \$23800
3. Person \$26800
4. Person \$29750
5. Person \$32150
6. Person \$34500
7. Person \$36900
8. Person \$39250

Emergency Responsibilities

Sheriff's Department

The City has contracted with the Sheriff's Department for law enforcement services since the City's incorporation in 1958. Both the City and the County consider themselves partners in this relationship. With a Sheriff's Local Station adjacent to City Hall, the community has the sense of being serviced by its own police department while benefiting from the cost savings and other efficiencies that a County contract offers.

Over the years, the City Council's highest priority has been the safety and security of the City's residents and businesses. Towards that end, law enforcement has consistently represented the largest, single expenditure category in the City's budget.

The City supports the following law enforcement programs:

- Problem Specific Policing (PSP) Team
- Operation Safe Streets (OSS)
- Helicopter Patrol
- Gang Crime Suppression Program (GCSP)
- Motorcycle Traffic Enforcement
- Bicycle Apprehension Team (BAT)
- Business License Investigation, Housing Task Force
- Gang Alternative Prevention Program (GAPP)
- Substance Abuse and Narcotics Education (SANE)
- School Attendance Review Board (SARB)
- Family Abuse Intervention and Resources (FAIR)
- Are You OK? (RUOK)
- Operation Kid Print
- Neighborhood Watch
- Business Watch
- Citizen Ride Along Program
- Citizen Academy
- Senior Volunteer Patrol
- Civilian Volunteer Program
- Sheriff's Reserve Program
- Sheriff's Explorer Scout Program
- Vital Intervention & Directional Alternatives (VIDA)
- Safety Through Our Perseverance - Intervention Team (STOP-IT)
- We Tip School Safety Program

Fire Department

The City of Pico Rivera contracts with the Los Angeles County Fire Department for fire prevention, protection and control, as well as medical and other emergency services.

Calls made to the emergency **9-1-1** number are routed through its command and control operation. In keeping with its fire prevention and protection responsibilities, the Fire Department conducts inspections of all buildings to ensure compliance to fire and life safety regulations. These inspections are conducted before a building or structure is occupied and on a regular basis thereafter. It also conducts investigations of major alarm fires and other fires when mandated by department policy.

The Fire Department has specially trained personnel who provide search and rescue services. It responds to calls for emergency medical services in times of distress. It is also involved when the safe handling, storage,

transportation and disposal of hazardous materials and wastes are required. The Fire Department is also involved in technical rescue and disaster response to the community.

There are three fire stations located in Pico Rivera:

- Station 25-- 9209 Slauson Avenue
- Station 40-- 4864 Durfee Avenue
- Station 103-- 7300 Paramount Boulevard

The City of Pico Rivera

The City of Pico Rivera has a SEMS-compliant Emergency Response Plan and Organization which utilizes the Community Center adjacent to the City Hall as the Emergency Operations Center.

General Facilities

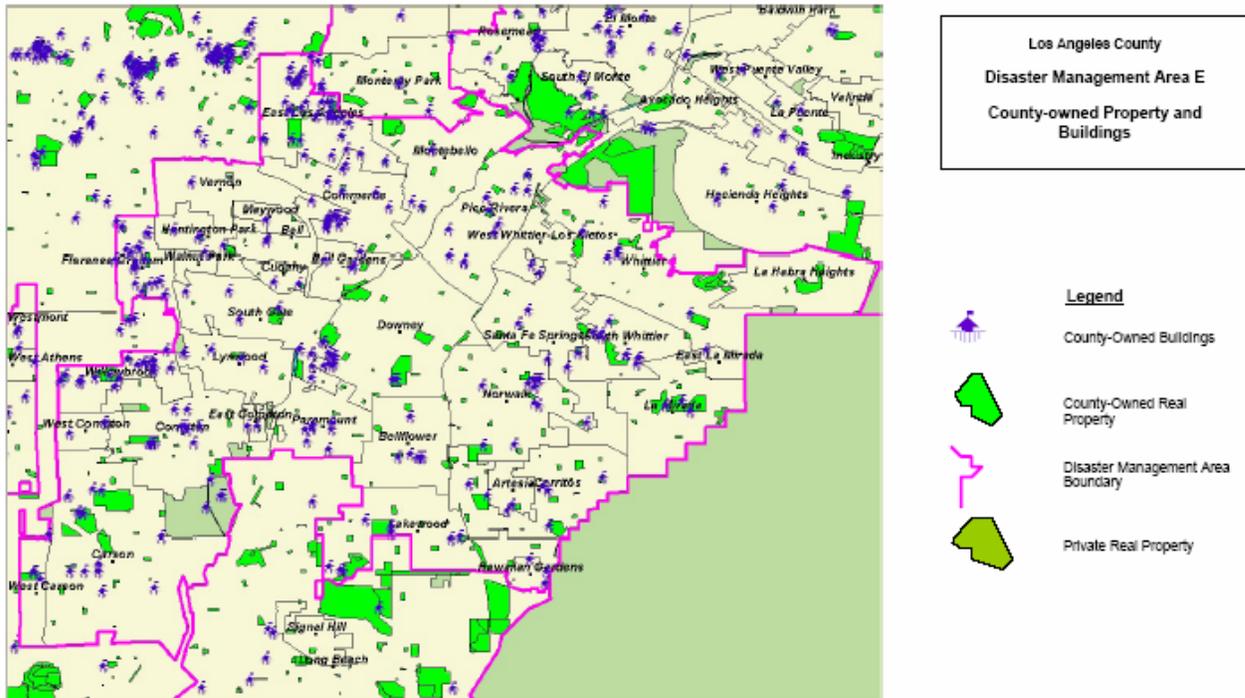
Military Bases

The U.S. Air Force controls a strip of land under the power lines which is used for vehicle and equipment storage at this time. A Marine Corp Reserve Unit is located in the City

Other Local Jurisdictions located in Pico Rivera

- Los Angeles Unified School District Food Distribution Center
- Whittier Water District Pumping Plant
- Montebello Unified School District/Montebello Gardens
- Los Angeles County Flood Control Projects
- Los Angeles County Road Department, Bridges and roads
- County Sheriff's and Fire Facilities

Map of Los Angeles County-owned Property in Proximity to Pico Rivera (Los Angeles County GIS Data)



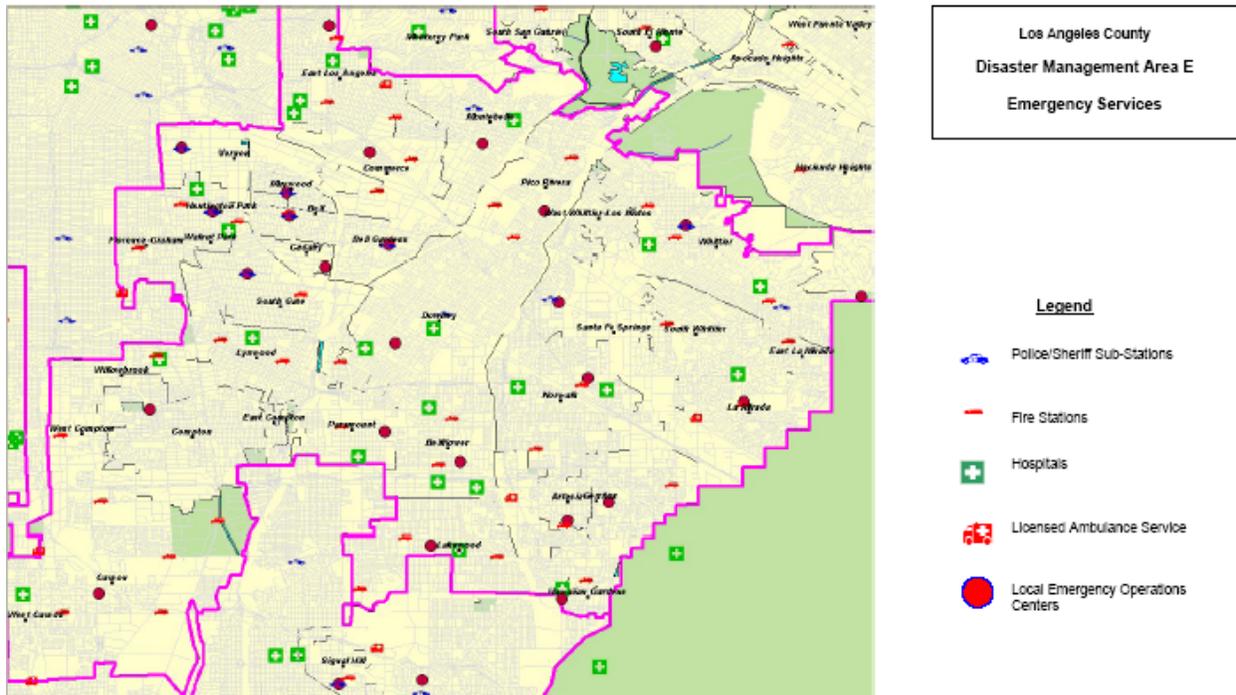
State owned Facilities

- Cal Trans Facilities, Bridges, and roads

Federal Owned Facilities

- Whittier Narrows Dam
- U.S. Post Office
- U.S. Marine Corp Reserve Unit

Area Emergency Response Facilities (Information from Los Angeles County G.I.S.)



Social Services Organizations

Catholic Charities of Los Angeles

Since 1919, the organization has assisted people in need, especially the poor. More than 20 programs staffed by professionals and volunteers serve 200,000 people every year. Services range from assistance for families living in poverty to help for families making the transition from welfare dependency.

Services: after-school care for children, assistance to refugees and immigrants, food programs for homeless, elderly and youth, spiritual support, temporary shelter, psychological counseling and welfare transition assistance.

Community Advocates for People's Choice

CAPC, Inc. is a nonprofit social service agency serving adult disabled Pico Rivera residents. We provide supported employment, supported living, independent living, and community inclusion services. We have been providing services since 1984, are a member of the Pico Rivera Chamber of Commerce, and receive financial support from the City of Pico Rivera Community.

Intercommunity Blind Center

IBC offers a variety of programs and services to assist clients with independent living. From cooking, household, management and Braille, to support groups, recreational activities and youth enrichment, IBC helps clients learn skills necessary to lead productive, self-sufficient lives.

Services: Personal care and household management, reading and writing instruction, counseling and support groups, recreational outings, referral service, correspondence assistance and volunteer opportunities.

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Consolidated Youth Services Network

CYSN has since 1976 provided no-cost crisis intervention and crime prevention services to youth under the age of 18 and their families who meet certain income requirements. Professionally –trained and licensed counselors offer help with substance abuse, addictions,

L.A. Center for Alcohol and Drug Abuse

L.A. CADA provides programs to help clients stop using drugs and alcohol. The agency offers both outpatient and in-home services to more than 4,500 people annually. Substance abuse rehabilitation and educational programs are available, along with individual and family counseling and anger management training.

Services: Drug and alcohol rehabilitation for teens and adults, live-in rug rehabilitation for mothers, parenting classes, drug awareness education, AIDS awareness and HIV outreach programs, counseling and family reunification.

Intercommunity Child Guidance Center

ICGC provides children, adolescents and families in the community with affordable, culturally-sensitive, and professional mental health services. For 42 years, ICGC has offered child abuse prevention services, free parenting education in English and Spanish, anger management classes, and substance abuse help and counseling for teens.

Services: Crisis intervention, parenting education, child abuse prevention, mental health services, student training, substance abuse treatment, foster care assessment, psychological counseling and medication management.

Helpline Youth Counseling

Founded in 1971, the community-based youth and family service organization provides comprehensive prevention and early intervention counseling services to help reduce juvenile delinquency, child abuse and neglect. HYC's Youth services Division offers specialized individual family and on-campus training and workshops.

Services: Comprehensive prevention and early intervention counseling, life-skills training, individual, group and family counseling, parenting education and on-campus programs offered to area schools.

Red Cross Rio Hondo Chapter

The Rio Hondo Chapter of the American Red Cross helps prevent, prepare for and respond to emergency situations. The local chapter offers a variety of specialized training in first-aid, disaster management, emergency response, pet first-aid, CPR and lifesaving skills. Fire prevention, earthquake preparedness and programs for seniors also are available.

Services: Emergency shelters, assistance for individuals and families displaced by fire, flood or other disasters, immunizations, lifesaving skills, CPR training, first-aid, emergency preparedness planning, Y2K awareness, programs designed especially for elderly and home safety training.

Whittier Meals on Wheels

The volunteer organization delivers meals to anyone in the community who is unable to prepare or obtain adequate meals on their own. Since 1973, the agency has averaged 120 deliveries per day. Prepared and packaged by Whittier Hospital, meals are delivered 5 days per week by volunteers who donate their time and vehicles.

Services: Deliver hot and cold meals to anyone in the community who is unable to prepare or obtain adequate meals, especially senior citizens, invalids and individuals with chronic illness or disability.

Southeast Area Social Services Funding Authority

SASSFA is a public joint powers agency created in 1979 to provide social programs for the elderly, the economically disadvantaged and residents with special needs. From respite care to in-home assessments, employment assistance to youth programs, SASSFA assists people of all ages and backgrounds. SASSFA serves the cities of Pico Rivera, La Mirada, Los Nietos, Santa Fe Springs and Whittier.

Services: Job search assistance, career planning, educational training and peer counseling for youth, job retraining for older adults, welfare-to-work program, care management, counseling, telephone reassurance, prescription intervention and volunteer opportunities.

The Retired & Senior Volunteer Program

RSVP helps people 55 years and older, retired or not, utilize their skills by volunteering to help others based on their skills, abilities and interests, and the needs of the community. Volunteers are compensated for transportation expenses.

Services: Matches Senior citizens, with volunteer opportunities. Services include grocery shopping for the frail and elderly, literacy programs, and the Senior Volunteer Police Force.

Southern California Rehabilitation Services

SCRS provides independent-living services to clients in 17 cities throughout Southeast Los Angeles County. Founded in 1979, the agency offers a wide variety of programs to help disabled persons lead productive, independent lives. All services are offered free of charge.

Services: Housing assistance, personal care referral, cross disability peer counseling, independent living skills training, computer training, disability/sensitivity training, benefits counseling, emergency bus and rail transportation, job search and grocery shopping assistance.

Southern California Alcohol and Drug Programs

Established in 1972, SCADP offers residential recovery programs for men and women, as well as outpatient programs for youth, adults and families. All services are offered in both English and Spanish based on a sliding fee scale. Addiction treatment is also available in sign language. The agency also operates special programs for persons with AIDS or HIV, the homeless and victims of domestic violence.

Services: Recovery and treatment programs for youth and adults to overcome substance abuse, programs designed for Spanish-speaking clients and families, victims of domestic violence and the homeless, services for people living with AIDS or HIV, treatment programs offered in Spanish and sign language.

We Tip

We Tip accepts tips from anywhere in the United States, Puerto Rico and the Virgin Islands. The agency provides a hotline 24 hours a day, 365 days a year. All claims remain absolutely anonymous. In 27 years of operation, no informant has ever been identified, subpoenaed or called to testify.

Services: Provides nationwide hotlines answered by live operators for callers to report crimes anonymously. Tips are immediately forwarded to law enforcement agencies. Rewards are paid anonymously through postmasters using a fictitious code name and case number.

Women's and Children's Crisis Shelter

WCCS provides emergency assistance, including shelter, food, clothing and financial aid, to battered women and children. The agency also offers support and intervention services to educate and assist victims. Programs are available in English and Spanish.

Services: Emergency shelter, food, clothing and other essentials for battered women and children, legal referrals, financial aid, support counseling, housing placement assistance, life skills training, transportation to and from appointments, parenting classes and outreach services.

Assets

Inventory of Assets

The following pages are listings of assets for the City of Pico Rivera, Pico Water District and for the El Rancho Unified School District. The numbers in the last column are for critical facility rating, with 1 being the most critical and 3 the least. If the rating is “—”, it was not rated.

In accordance to the HAZUS information provided by the University of Southern California the best estimate is that the City of Pico Rivera and its Planning Jurisdictions could suffer a loss of 20% to 30% of their total asset value as a result of a major earthquake. Because the values used in the FEMA HAZUS models are listed at less dollars per square foot than the current building costs in California, it is difficult to arrive at a true dollar value for the estimated loss and damage figures.

Earthquake loss for privately owned property in the Planning Jurisdictions is estimated to be approximately the same per cent of value to the homes as the publicly owned property. The Planning Jurisdictions are estimating that a significant number of small local businesses could be forced out of business in accordance with FEMA disaster figures based on past disasters, which suggests up to 40% of businesses are at risk following a disaster.

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

VERSION 1.1 (NOVEMBER 2004)

Facility	Address	Use	Date Built	Sq. Ft.	Value	Rating
PWD Office	4843 S. Church Street	District Office		2,600	\$384,056	2
PWD Meter Building	4843 S. Church Street	Tools/Supplies/Inventory		396	\$27,273	-
PWD Truck & Equipment Storage Bldg.	4843 S. Church Street	Shop Tools/Supplies/Inventory		3,000	\$123,693	-
PWD Records Storage Bldg.	4843 S. Church Street	Building		788	\$30,049	-
CPR Corporate Yard	9633 Beverly Road	City Yard Warehouse & Offices	1966	9,040	\$426,004	1
CPR Parks and Rec. Bldg. /EOC	6767 Passons Blvd.	Community Service Bldg.	1961	6,946	\$856,006	1
CPR Water Well	8739 Gallatin	Pump House/Well #1	1995	225	\$11,934	1
CPR Water Well	8739 Gallatin	Pump House/Well #2	1980	600	\$53,040	1
CPR Water Well	8316 Washington Blvd.	Building/Well #3				1
CPR Water Well	8317 Washington Blvd.	Well #4		48	\$53,670	1
CPR Water Well	8305 Slauson	Well #5	1977	300	\$39,902	1
CPR Water Well	8231 Elmont	Pump House/Well #6	1992	300	\$45,901	1
CPR Water Well	8523 Ceylon	Pump House/Well #7	1992	300	\$5,535	1
CPR Water Well	9623 Telegraph	Well #8/Chlorine Bldg	1977	200	\$21,597	1
CPR Water Well	9403 Myron/Passons	Well #9/Chlorine Bldg	1992	225	\$32,725	1
CPR Water Well	9732 Lundahl Drive	Well #11	1990	400	\$191,743	1

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

VERSION 1.1 (NOVEMBER 2004)

Facility	Address	Use	Date Built	Sq. Ft.	Value	Rating
CPR Water Well	9732 Lundahl Drive	Well #12	1990	400	\$191,743	1
CPR Water System Booster Station	8739 Gallatin	Booster Station	1980	1,072	\$143,077	1
CPR Water System Booster Station	9732 Lundahl Drive	Booster Station	1977	512	\$45,217	1
CPR Water System Booster Station	8316 Washington Blvd.	Booster Station		600	\$73,304	1
CPR Water System Reservoir	8739 Gallatin	Storage Tank	1977		\$185,449	1
CPR Water System Reservoir	8316 Washington Blvd	Storage Tank	1977		\$175,333	1
CPR Water System Reservoir	9732 Lundahl Drive	Storage Tank	1977		\$208,612	1
CPR City Hall	6615 Passons Blvd.	Administration Offices	1963	23,707	\$4,217,237	2
CPR Smith Park - Bldg.	6016 Rosemead Blvd.	Offices, Auditorium & Pool	1980	8,000	\$3,086,407	2
CPR Rivera Park - Gym	9530 Shade Lane	Gym	1959	2,500	\$1,079,288	2
CPR Pico Park - Community Center	9528 Beverly Blvd.	Community Service Bldg.	1996	25,000	\$3,767,875	2
CPR Water System Chlorine Shed	8739 Gallatin	Chlorine Bldg for Well #1	1985	25		2
CPR Water System Chlorine Shed	8739 Gallatin	Chlorine Shed for Well #2	1993	100	\$4,642	2
CPR Water System Chlorine Shed	8316 Washington Blvd.	Chlorine Shed for Well # 3	1977	75		2
CPR Water System Chlorine Shed	8305 Slauson	Chlorine Bldg for Well #5	1977	64		2
CPR Water System Chlorine Shed	9732 Lundahl Drive	Chlorine Shed for Well #11	1977	42	\$41,238	2

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

VERSION 1.1 (NOVEMBER 2004)

Facility	Address	Use	Date Built	Sq. Ft.	Value	Rating
CPR Water System Chlorine Shed	9732 Lundahl Drive	Chlorine Bldg for Well #12	1980	400	\$5,306	2
CPR Corporate Yard - Garages	9633 Beverly Road	Garage & Storage	1945	18,000	\$93,486	3
CPR Senior Center	9200 Mines Avenue	Center/Art Bldg.	1989	16,000	\$3,250,024	3
CPR Rivera Park Multi-purpose room	9530 Shade Lane	Multi-Purpose Room	1958	4,500	\$1,415,799	3
CPR Corporate Yard - Storage Bldg.	9633 Beverly Road	Storage	1945	18,000	\$92,619	-
CPR Sports Arena/Campground	3400 San Gabriel River Parkway	Arena/Restrooms	1979/ 1994	1,288	\$3,253,393	-
CPR Stables	3400 San Gabriel River Parkway	15 Acres & Stables/Storage Building	1978/ 1979	576	\$1,590,628	-
CPR Campground	3400 San Gabriel River Parkway	Ranger Station /Restrooms & Campground	1971/ 1979	1,300	\$82,347	-
CPR Pico Park - Storage Buildings	4525 Tobias Street	Storage	1959	8,568	\$509,431	-
CPR Mex - Am Senior Center	4632 Orange Street	Senior Citizen Building	1977	2,000	\$859,733	-
CPR Rio Vista Park - Rec Center	8751 Coffman Avenue	Recreation Center	1959	2,000	\$154,175	-
CPR Rivera Park - Crafts Room	9530 Shade Lane	Craft Room	1955	1,000	\$169,937	-
CPR Streamland Park - Restrooms (old and new)	3565 Durfee Avenue	Restrooms	1988	1,414	\$63,784	-
CPR Streamland Park - Storage Blvd.	3635 Durfee Avenue	Storage Shed		100	\$7,163	-
CPR Records Retention Bldg.	9732 Lundahl Drive	Records Retention	1985	1,406	\$0	-
CPR Golf Course	3260 Fairway Drive	Club House & Maintenance	1968	2,000	\$998,783	-

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

VERSION 1.1 (NOVEMBER 2004)

Facility	Address	Use	Date Built	Sq. Ft.	Value	Rating
CPR - owned private residence	9301 Wampler	Dwelling and Garage	1966	900	\$81,145	-
CPR - owned private residence	9309 Wampler	Dwelling	1964	900	\$86,418	-
CPR - owned private residence	6614 Citronell	Dwelling	1966	900	\$92,751	-
CPR - owned private residence	6618 Citronell	Dwelling	1966	900	\$91,954	-
CPR - owned private residence	6624 Citronell	Dwelling	1966	900	\$98,517	-
CPR - owned private residence	6602 Citronell	Dwelling	1965	900	\$101,369	-
CPR - owned private residence	6608 Citronell	Dwelling	1949	1,106		-
CPR Rio Hondo Park - Storage Building	4628 Orange Street	Storage and Restrooms	1958	526	\$51,251	-
CPR History & Heritage Museum	9122 Washington Blvd.	Chamber of Commerce		1,000	\$104,722	-
CPR Al Natividad Center	5016 Passons Blvd.	Community Service Bldg.	1966	2,400	\$249,668	-
ERUSD El Rancho High School	6501 Passons Blvd.	School	1951	284,950	\$45,207,573	1
ERUSD Burke Middle School	8101 Orange Avenue	School	1960	65,275	\$10,245,739	1
ERUSD North Park Middle School	4450 S. Durfee Avenue	School	1955	75,571	\$11,070,038	1
ERUSD Rivera Middle School	7200 Citronell Street	School	1951	69,152	\$10,620,099	1
ERUSD District Office 1 (Admin)	9333 Loch Lomond Dr.	School	1951	13,764	\$1,413,248	2
ERUSD Salazar High/Teen Parents	9426 Marjorie Street	School	1968/ 1999	6,393	\$1,369,933	-

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

VERSION 1.1 (NOVEMBER 2004)

Facility	Address	Use	Date Built	Sq. Ft.	Value	Rating
ERUSD El Rancho Adult School	9515 Haney Street	School			\$2,967,955	-
ERUSD Meller Elementary School	9115 Balfour Street	School	1955	56,329	\$11,410,427	-
ERUSD Birney Elementary School	8501 Orange Avenue	School	1951	51,752	\$6,782,215	-
ERUSD Durfee Elementary School	4220 S. Durfee Avenue	School	1950	34,932	\$5,369,650	-
ERUSD Magee Elementary School	8200 Serapis Avenue	School	1951	50,920	\$6,397,664	-
ERUSD North Ranchito Elementary School	8837 Olympic Avenue	School	1951	53,997	\$7,152,838	-
ERUSD Obregon Elementary School	3300 Sandoval Avenue	School	1966	19,363	\$3,525,197	-
ERUSD Pio Pico Elementary School	4211 Columbia Street	School	1951	29,306	\$3,982,522	-
ERUSD Rio Vista Elementary School	8809 Coffman-Pico Rd.	School	1951	43,087	\$5,976,797	-
ERUSD Rivera Elementary School	7250 Citronell Street	School	1951	39,077	\$5,260,559	-
ERUSD Selby Grove Elementary School	8110 Paramount Blvd.	School	1958	29,481	\$5,702,836	-
ERUSD South Ranchito Elementary School	5241 S. Passons Blvd	School	1951	50,798	\$7,258,378	-
ERUSD Valencia Elementary School	9241 Cosgrove Street	School	1951	39,903	\$5,511,433	-
ERUSD Child Development Center/Maizeland	7601 Cord Avenue	School	1964	27,396	\$3,828,232	-
ERUSD District Office II (Business)	8910 Slauson Avenue	School Offices	1937	21,132	\$2,611,989	-
ERUSD District Office III (Admin)	5211 S. Passons Blvd.	School Offices	1970	7,200	\$316,823	-

Critical Services

City of Pico Rivera

<u>Service</u>	<u>Provider</u>	<u>Rating</u>
Emergency Operations Center	City of Pico Rivera (CPR)	1
Emergency Shelter	CPR, ERUSD	1
Housing	CPR,	3
Potable Water	Pico Water District , CPRW	1
Police	Sheriff's Department	1
Fire/Paramedic	County Fire Department	1
Building Inspection	CPR	2
Street/Bridge Inspection	CPR/Cal Trans, LA County	2
Public Information	CPR	1

Most Critical Service	Rating 1 – Needs to be ongoing during the Disaster
Moderate Critical Service period	Rating 2-Needs to occur during as soon after the incident
Lowest Critical Service	Rating 3- Needs to be as soon as possible post disaster

El Rancho School Districts Critical Services

The School District has an agreement with the American Red Cross to supply Shelters in the event of a disaster.

El Rancho and three middle school sites are critical facilities. The administration offices are a 2nd priority.

El Rancho School District's Emergency Vendor List (critical outside services)

1. Hawk II, Chevron Station
2. Unocal 76, Fleet Services
3. Home Depot
4. Johnstone Supply
5. Orbit Rental

Pico Water District

Pico Water District considers all of their assets to be critical to the mission of providing water services to its; service area

Commissions, Special Districts, Services

Water/Waste Water/Sewer

Water is supplied to the residents of Pico Rivera by two providers, the Pico Water District and the Pico Rivera Water Authority (PRWA). The Pico Water Authority delivers water to approx. 9,100 customers. The PRWA's system is comprised of chlorination facilities, three small reservoirs with the combined storage of 1 million gallons, 90 miles of water mains 875 fire hydrants and 11 booster pumps with the capacity of 12,500 gallons per minute. The PRWA is interconnected with the City of Whittier and the San Gabriel Water Company from which it may draw in emergencies.

The Pico Water District

Since 1926 substantial development has occurred within the Pico Water District and the number of service connections increase from 243 in 1926 to currently serving approximately 20,559 residents or slightly more than 30% of the population of Pico Rivera

Schools

Pico Rivera is served by the El Rancho Unified School District:
9333 Loch Lomond Drive
Pico Rivera, California 90660
(562) 942-1500

Public Schools in Pico Rivera:

- EL RANCHO (Students: 3,067; Location: 6501 S. PASSONS BLVD.; Grades: 09 - 12)
- SALAZAR (RUBEN) CONTINUATION (Students: 152; Location: 9515 HANEY ST.; Grades: 09 - 12)
- RIVERA MIDDLE (Students: 1,044; Location: 7200 CITRONELL AVE.; Grades: 06 - 08)
- NORTH PARK MIDDLE (Students: 984; Location: 4450 S. DURFEE AVE.; Grades: 06 - 08)
- BURKE (OSBURN) MIDDLE (Students: 892; Location: 8101 ORANGE AVE.; Grades: 06 - 08)
- SOUTH RANCHITO ELEMENTARY (Students: 702; Location: 5241 S. PASSONS BLVD.; Grades: KG - 05)
- MELLER (MARY E.) ELEMENTARY (Students: 603; Location: 9115 E. BALFOUR ST.; Grades: KG - 05)
- NORTH RANCHITO ELEMENTARY (Students: 588; Location: 8837 E. OLYMPIC BLVD.; Grades: KG - 05)
- RIVERA ELEMENTARY (Students: 574; Location: 7250 CITRONELL ST.; Grades: KG - 05)
- MAGEE (LAWRENCE T.) ELEMENTARY (Students: 574; Location: 8200 SERAPIS AVE.; Grades: KG - 05)
- BIRNEY (ALICE M.) ELEMENTARY (Students: 569; Location: 8501 ORANGE AVE.; Grades: KG - 05)
- RIO VISTA ELEMENTARY (Students: 524; Location: 8809 COFFMAN-PICO ROAD; Grades: KG - 05)
- *Private primary/middle schools in Pico Rivera:*
- ST HILARY ELEMENTARY SCHOOL (Students: 372; Location: 5401 S CITRONELL AVE; Grades: KG - 8)
- ST MARIANNE SCHOOL (Students: 289; Location: 7911 BUHMAN AVENUE; Grades: KG - 8)

- CUMORAH JR ACADEMY (Students: 73; Location: 4561 DURFEE AVE; Grades: PK - KG)

Utilities

Electrical service is provided by Southern California Edison. Gas is supplied by the Southern California Gas Company.

Health Care

Hospitals

Pico Rivera is not directly served by a hospital and its residents must travel out of the community for hospital care. There are hospitals in both the City of Whittier and Montebello for full care facilities:

Presbyterian Intercommunity Hospital
12401 Washington Blvd.
Whittier, CA 90602

Beverly Hospital
309 W. Beverly Boulevard
Montebello, California 90640

Special Healthcare Facilities

Pico Rivera is served by five nursing and convalescent care homes, one of which is for the mentally challenged. All of these facilities are privately owned.

Clinics

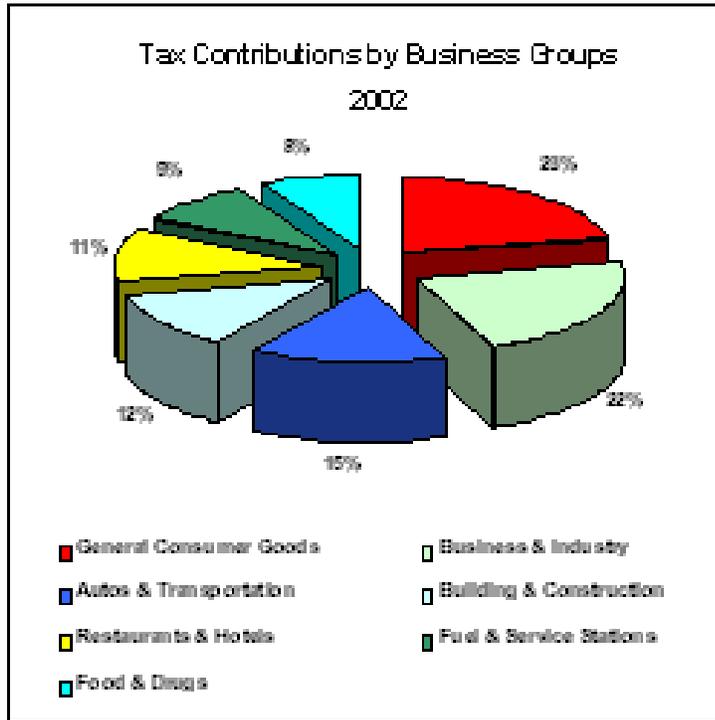
There are no medical clinics operating in the City of Pico Rivera. Citizens must travel short distances to neighboring jurisdictions for medical care.

Faith Based Organizations and Churches

Pico Rivera has sixteen Houses of Worship in its City Limits

Business & Industry

Tax Contributions by Business Groups 2002



2002 Top Tax Producing Businesses (In alphabetical order)

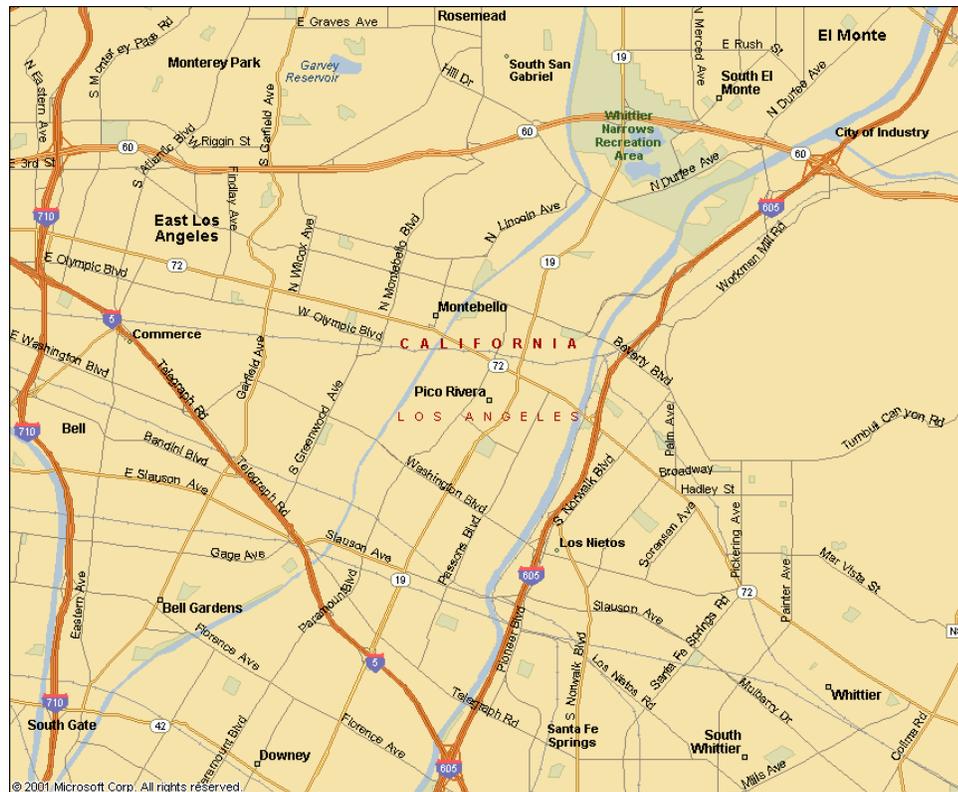
- | | |
|---|--------------------------------------|
| 1. AM PM Mini Market | 11. Lowes Home Improvement Warehouse |
| 2. Apro | 12. McDonalds |
| 3. California Wholesale Material Supplies | 13. Power Lift |
| 4. Cintas | 14. Ross |
| 5. Dal Rae Restaurant | 15. Savon Drugs |
| 6. Foamex Carpet Cushion | 16. Saw Service of America |
| 7. Home Depot | 17. South Coast Peterbilt |
| 8. Ionics Ultrapure Water Corp. | 18. Target |
| 9. K-mart | 19. United Rentals |
| 10. Kwik Gas | 20. WalMart |

The City of Pico Rivera has a developed 630,000 sq. ft. shopping center that includes a Ross and Marshalls Department Stores, Borders Books, Factory 2-U, Ann's Linens, Staples, movies and care, Starbucks, Kripy Kreme and several other restaurants. The Pico Rivera Chamber of Commerce lists 1280 businesses located in Pico Rivera in its 2003/2004 report.

Transportation

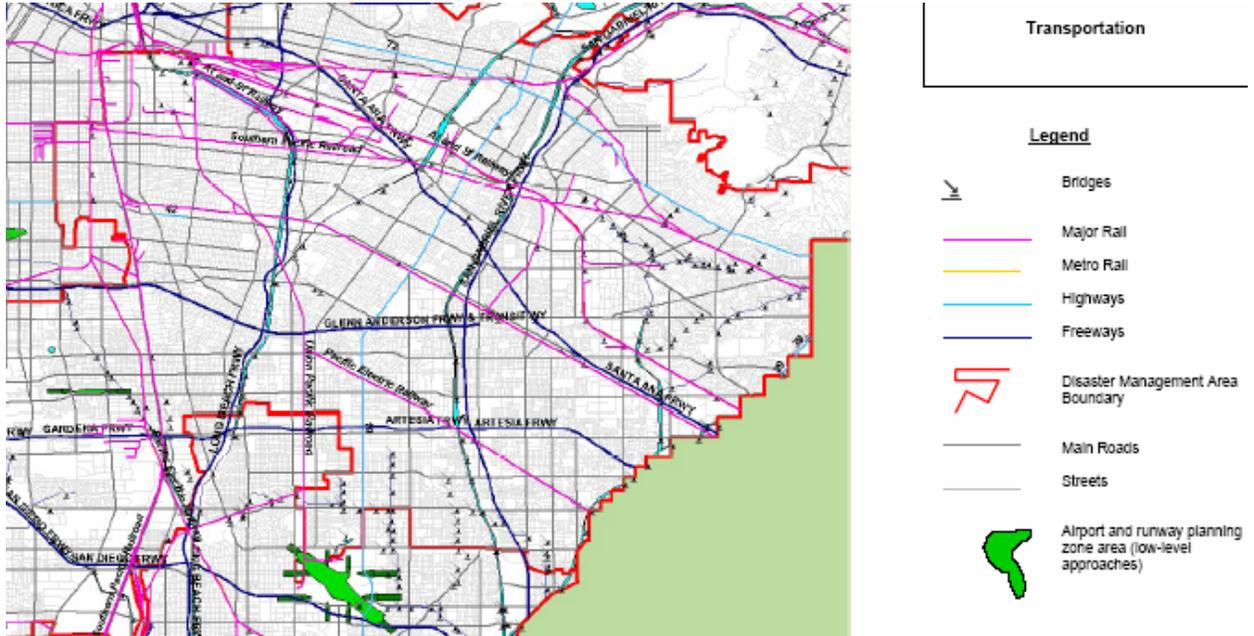
Freeways

Three major freeways provide access to the City of Pico Rivera, the San Gabriel (605), the Pomona (60) and the Santa Ana (5). **Map showing Major Roadways near Pico Rivera**



Railways

The City of Pico Rivera is accessible through four rail lines, the Burlington Northern Santa Fe Rail Company, Southern Pacific Lines and the Union Pacific Railroad and the Metro Line.



Railway incidents and accidents in the Region are a serious threat to the City of Pico Rivera. In addition to accidents and incident trains can cause traffic and emergency response vehicle problems within the City itself.

Airports

Pico Rivera is within 35-30 miles from three major airports, LAX, the Ontario Airport and the John Wayne airport. Even casual observation recognizes that one or more airport approach and takeoff patterns fly over the City of Pico Rivera and is Planning Jurisdictions.

Mass Transit

Three Bus lines serve the City; they are the MTA Bus Lines, the Montebello Bus Line and the Dial-a-Ride Service. The City of Pico Rivera's three transportation subsidy programs allow students, seniors and handicapped residents to purchase bus tickets and passes at discounted costs.

The City of Pico Rivera subsidizes a MTA Buss Passenger Subsidy Program through is Proposition "A" funds. The passengers affected are handicapped passengers, senior citizens, k-12 students and college/vocational students.

Montebello Bus service is also subsidized by the city for students who live or attend school in Pico Rivera.

The Pico Rivera Dial-a-Ride was inaugurated in 1984 using proposition "A" Sales tax revenue for no cost transportation to residents that are 55 years old and to those who are handicapped.

Ports & Harbors

The City of Pico Rivera is 18 miles away from the Port of Los Angeles and 16 miles from the Port of Long Beach. The impact of the Ports on the City is primarily in the cargo being transported by rail through the City and the cargo being transported down the freeways that impact the Planning Jurisdiction that originate from the Ports. The Planning jurisdictions do not have the ability to impact or accurately know what type of cargo is passing through the community on the freeway system from the Ports. For the purposes of this Plan we are assuming a large number of hazardous materials are being shipped.

Climate

Local Meteorology

Pico Rivera has a Mediterranean climate, with mild, dry summers and cool Winters, The average rainfall is 15 inches annually.

Average Temperature (°F) High Low
 Minimum Period of Record: 30 years

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec												
70	48	71	49	73	51	77	53	79	57	84	61	89	64	89	65	88	64	82	58	75	52	71	47

Hydrology & Land Use

Reservoirs

The Whittier Narrows Dam is located above the city and is used during heavy rains to prevent flooding. There is not an actual reservoir just an area to temporarily store the excess water. The dam is considered a moderate risk and is described in the hazard Analysis section.

Rivers

Pico Rivera lies between the Rio Hondo and the San Gabriel Rivers at the foot of the Whittier Narrows Dam.

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.

Hazard Definitions

Kinds of Hazards

The Planning group did considered both natural and man-made hazards in their planning deliberations and prioritized those hazard in accordance with the description in this Plan

Severity of Hazards

The hazard risk prioritizations for the Planning Jurisdictions were based on the following criteria.

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

High Risk Priority	Moderate Risk Priority	Low Risk Priority
Earthquake	Dam Failure	Civil Unrest
Severe Weather	Flood	Wild land/Urban Fire
Transportation Loss	Economic Disruption	Drought
Utility Loss	Weapons of Mass Destruction/Terrorism	Heat Wave
Water/Wastewater Disruption	Biological Health/ Pandemic Diseases	
Data/Telecommunications Loss		
Transportation/Pipeline		
Accidents		
Hazardous Materials		

Prioritization of Hazard Matrix Results

Stakeholder Prioritization

1. Earthquake	20.1
2. Severe Weather	12.6
3. Transportation Loss	12.2
4. Utility Loss	12.1
5. Water/Wastewater Disruption	11.7
6. Data/telecommunications Loss	11.7
7. Transportation/Pipeline Accidents	11.6
8. Hazardous Materials	High
<hr/>	
9. Dam Failure	10.0
10. Flood	Moderate
11. Economic Disruption	9.5
12. Weapons of Mass Destruction/Terrorism	9.0
13. Biological Health/pandemic Diseases	8.3
<hr/>	
14. Civil Unrest	Low
15. Wildland/Urban Interface Fire	5.8
16. Drought	4.0
17. Heat Wave	4.0

High Risk Priority Hazards

Earthquake

Earthquake was rated High Risk by the Planning Jurisdictions

Southern California has numerous active earthquake faults that can cause damage in the City of Pico Rivera and its Planning Jurisdictions.

The most recent significant earthquake event affecting Southern California was the January 17th 1994 Northridge Earthquake. At 4:31 A.M. on Monday, January 17, a moderate but very damaging earthquake with a magnitude of 6.7 struck the San Fernando Valley. In the following days and weeks, thousands of aftershocks occurred, causing additional damage to affected structures.

57 people were killed and more than 1,500 people seriously injured. For days afterward, thousands of homes and businesses were without electricity; tens of thousands had no gas; and nearly 50,000 had little or no water. Approximately 15,000 structures were moderately to severely damaged, which left thousands of people temporarily homeless. 66,500 buildings were inspected. Nearly 4,000 were severely damaged and over 11,000 were moderately damaged. Several collapsed bridges and overpasses created commuter havoc on the freeway system. Extensive damage was caused by ground shaking, but earthquake triggered liquefaction and dozens of fires also caused additional severe damage. This extremely strong ground motion in large portions of Los Angeles County resulted in record economic losses.

However, the earthquake occurred early in the morning on a holiday. This circumstance considerably reduced the potential effects. Many collapsed buildings were unoccupied, and most businesses were not yet open. The direct and indirect economic losses ran into the 10's of billions of dollars.

To better understand the earthquake hazard, the scientific community has looked at historical records and accelerated research on those faults that are the sources of the earthquakes occurring in the Southern California region. Historical earthquake records can generally be divided into records of the pre-instrumental period and the instrumental period. In the absence of instrumentation, the detection of earthquakes is based on observations and felt reports, and are dependent upon population density and distribution. Since California was sparsely populated in the 1800s, the detection of pre-instrumental earthquakes is relatively difficult. However, two very large earthquakes, the Fort Tejon in 1857 (7.9) and the Owens Valley in 1872 (7.6) are evidence of the tremendously damaging potential of earthquakes in Southern California. In more recent times two 7.3 earthquakes struck Southern California, in Kern County (1952) and Landers (1992). The damage from these four large earthquakes was limited because they occurred in areas which were sparsely populated at the time they happened. The seismic risk is much more severe today than in the past because the population at risk is in the millions, rather than a few hundred or a few thousand persons.

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

Historic Earthquakes

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

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

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

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

Faults that are expected to impact the Pico Rivera Planning Jurisdictions:

Rio Hondo Fault: Part of the Southern California Fault System

Pico Fault: Part of the Southern California Fault System

Whittier Fault: An Active Southern California Fault with recent history.

The Los Angeles-Whittier Narrows Earthquake of October 1, 1987

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

Description of the Disaster

Overview

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

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

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

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

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

The earthquake damaged more than 30 hospitals, nursing homes, medical care and outpatient facilities as far away as 30 miles from the epicenter. Businesses experienced significant financial disruption. Several large corporations reported structural and nonstructural damage, resulting in significant losses.

Numerous small businesses in Whittier experienced major losses and interruptions of business that in some cases were difficult to recover from.

Table 1

LOSSES BY COUNTY			
	Los Angeles	Orange	Total
Private Sector	\$244,080	\$8,648	\$252,728
Public Sector	<u>104,909</u>	<u>413</u>	<u>105,322</u>
TOTAL	<u>\$348,989</u>	<u>\$9,061</u>	<u>\$358,050</u>

Table 2

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

Geophysical Discussion

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

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

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

The Los Angeles metropolitan area, inhabited by more than 11 million people, is one of the key industrial, commercial, and cultural centers of the United States. As the area's population and development continue to expand, so does its vulnerability to damaging earthquakes. The 1971 San Fernando and the Whittier Narrows earthquakes, both moderate-sized events, demonstrate how vulnerable a complex modern urban society is to the damaging effects of earthquakes. Earthquakes of similar moderate magnitude can be expected to recur in the region on a regular basis. According to the

U.S. Geological Survey, there is a strong possibility that the potential for moderate magnitude earthquakes within the Los Angeles Basin has been underestimated by seismologists and emergency planners.

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

Damage Assessment

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

Unreinforced Masonry Structures

The most heavily damaged structures were older commercial buildings constructed of unreinforced masonry. The business district of Whittier experienced heavy damage to these types of structures. Following the earthquake, the entire business district was closed, and a number of the damaged buildings were demolished. Typical damage consisted of failure of one or more load-bearing walls, with occasional collapse of floor or roof diaphragm elements.

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

Residential Structures

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

Unreinforced masonry apartment buildings experienced significant damage, although none actually collapsed. Wood frames/stucco apartment buildings were less heavily impacted, but some sustained major cracking of exterior walls that in effect made the structure uninhabitable. Some damage occurred also to the more modern apartment and condominium structures, including wall cracks, fallen ceilings, and collapse of balconies. Damage was also reported to mobile homes. Typically, this damage involved loss of support from foundation piers due to earthquake shaking.

Modern Concrete Frame Structures

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

Nonstructural Damage

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

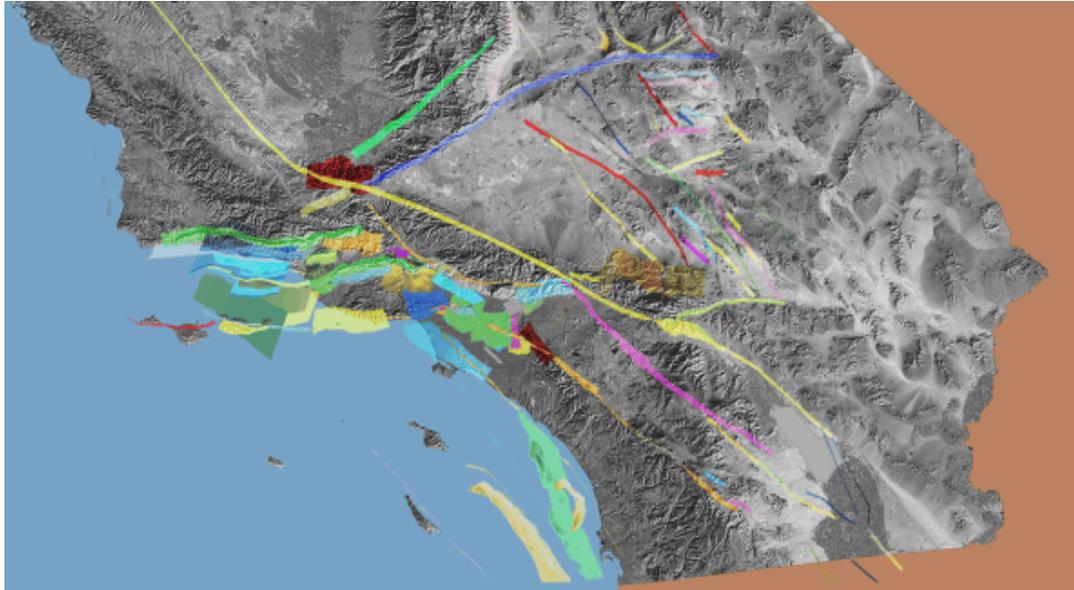
Transportation and Lifelines

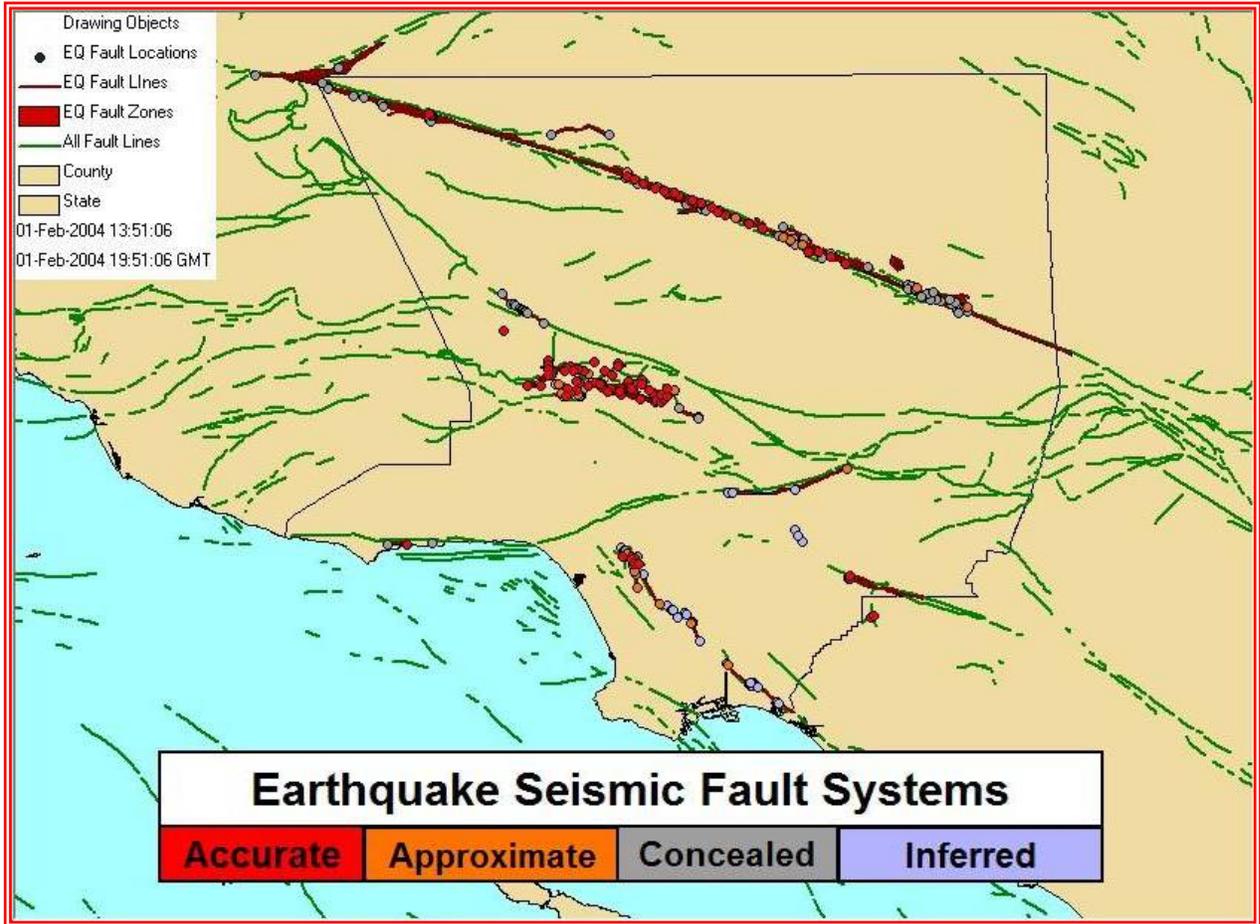
Damage to the transportation system was minimal. One exception was the Interstate 605 overpass at the intersection with Interstate 5, where damaged columns resulted in a one-day closure of both freeways at that location. Local roads and highways experienced little damage. Airports suffered enough damage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

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

Faults

SCEC Community Fault Model courtesy of Andreas Plesch, Harvard. 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. The nearest fault to you might be a few miles beneath your home. Areas that seem to have few faults can still experience strong shaking from earthquakes on unmapped faults or from large earthquakes on distant faults



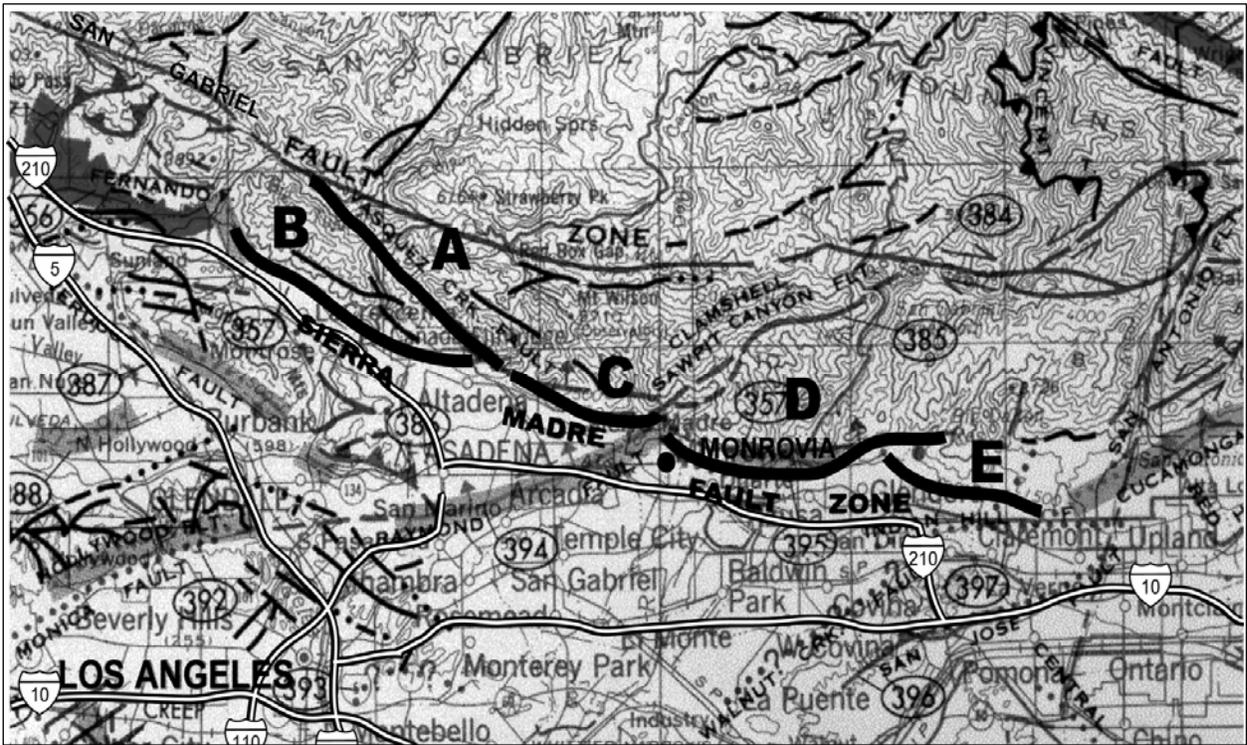


Sierra Madre Fault Zone

Fault Name:	SIERRA MADRE FAULT ZONE
Type Of Faulting:	Reverse
Length:	The zone is about 34 miles long; total length of main fault segments is about 46.5 mile, with each segment measuring roughly 9.3 miles long
Slip Rate:	between 0.36 and 4 mm/yr.
Interval Between Surface Ruptures:	Several thousand years
Probable Magnitudes:	M _w 6.0 - 7.0 (?)
Other Notes	This fault zone dips to the north.

The Sierra Madre fault zone is often divided into five main segments to more easily characterize this fairly complex system. The figure below shows the five segments (A to E) of the zone.

These five divisions, while simpler than the entire fault zone, should not be thought of as individual faults, however -- some of these segments are themselves complex systems of parallel and branching faults. It has been suggested that differing fault geometry in this zone keep each lettered segment separate during rupture events -- thus, neighboring segments should not rupture simultaneously. Others, however, suggest that the fault zone may rupture both in single-segment and multiple-segment breaks. The most recent surface ruptures are seen on the B and D segments. The least active segment, at least in surficial appearance, is the A segment, also known as the Vasquez Creek fault, which runs between the San Gabriel fault and the intersection of the B and C segments of the Sierra Madre fault zone. At the junction of the C and D segments, the Clamshell - Sawpit Canyon fault splays off from the fault zone, toward the northeast. One of the strands that makes up segment D is known as the Duarte fault, because of its location near that community. Segment E represents the easternmost part of this fault zone, and at its eastern end, it meets up with several other faults in a complex zone northwest of the town of Upland, near the epicenter of the 1990 Upland earthquake.



San Andreas Fault

While rupture on the Sierra Madre fault zone (theoretically) could be limited to one segment at a time, it has recently been suggested that a large event on the San Andreas fault to the north (like that of 1857) could cause simultaneous rupture on reverse faults south of the San Gabriel Mountains -- the Sierra Madre fault zone being a prime example of such. Whether this could rupture multiple Sierra Madre fault zone segments simultaneously is unknown,

Sierra Madre Fault Zone, <http://www.scec.org/madre.html>; May 25, 2000

Fault Name:	SAN ANDREAS FAULT ZONE
Type Of Fault:	right-lateral strike-slip
Length:	764 miles (340 miles south from Parkfield; 414 miles northward)
Last Major Rupture:	January 9, 1857 (Mojave segment) April 18, 1906 (Northern segment)
Slip Rate:	about 20 to 35 mm per year
Interval Between Major Ruptures:	average of about 140 years on the Mojave segment; recurrence interval varies greatly -- from under 20 years (at Parkfield only) to over 300 years
Probable Magnitudes:	M _w 6.8 - 8.0

San Andreas Fault Zone -- San Gorgonio Pass Area

The San Gorgonio Pass area is fairly complex, geologically speaking. Here the San Andreas fault interacts with other faults (most notably the San Jacinto fault zone and the Pinto Mountain fault) and thereby becomes somewhat fractured, over the distance extending from just north of San Bernardino to just north of Indio, some 70 miles. Because this deformation has been going on for well over a million years, ancient and inactive strands of the San Andreas fault can be found here. Other faults in this area have been "reawakened" recently after being dormant for hundreds of thousands of years. There is even evidence to suggest that there is no active, continuous main trace of the San Andreas fault going all the way through the pass, not even at depth -- implying that the San Andreas fault may currently be in the process of creating a new fault path through this area!

This could also mean that a single, continuous rupture from Cajon Pass to the Salton Sea (a stretch of the San Andreas that has not ruptured in historical times) is unlikely to occur. Fault rupture mechanics are still not well understood, however, and the discontinuity could prove to have little effect on tempering a major earthquake on this southern stretch of the San Andreas Fault zone

Raymond Hill Fault Zone

Name of Fault:	RAYMOND FAULT (RAYMOND HILL FAULT)
Type Of Fault:	left-lateral; only minor reverse slip
Length:	16.5 miles
Affected Nearby Communities:	Monrovia, San Marino, Arcadia, South Pasadena
Most Recent Surface Rupture:	Holocene
Slip Rate:	between 0.10 and 0.22 mm/yr
Interval Between Major Ruptures	roughly 4,500 years
Probable Magnitudes:	M _w 6.0 - 7.0

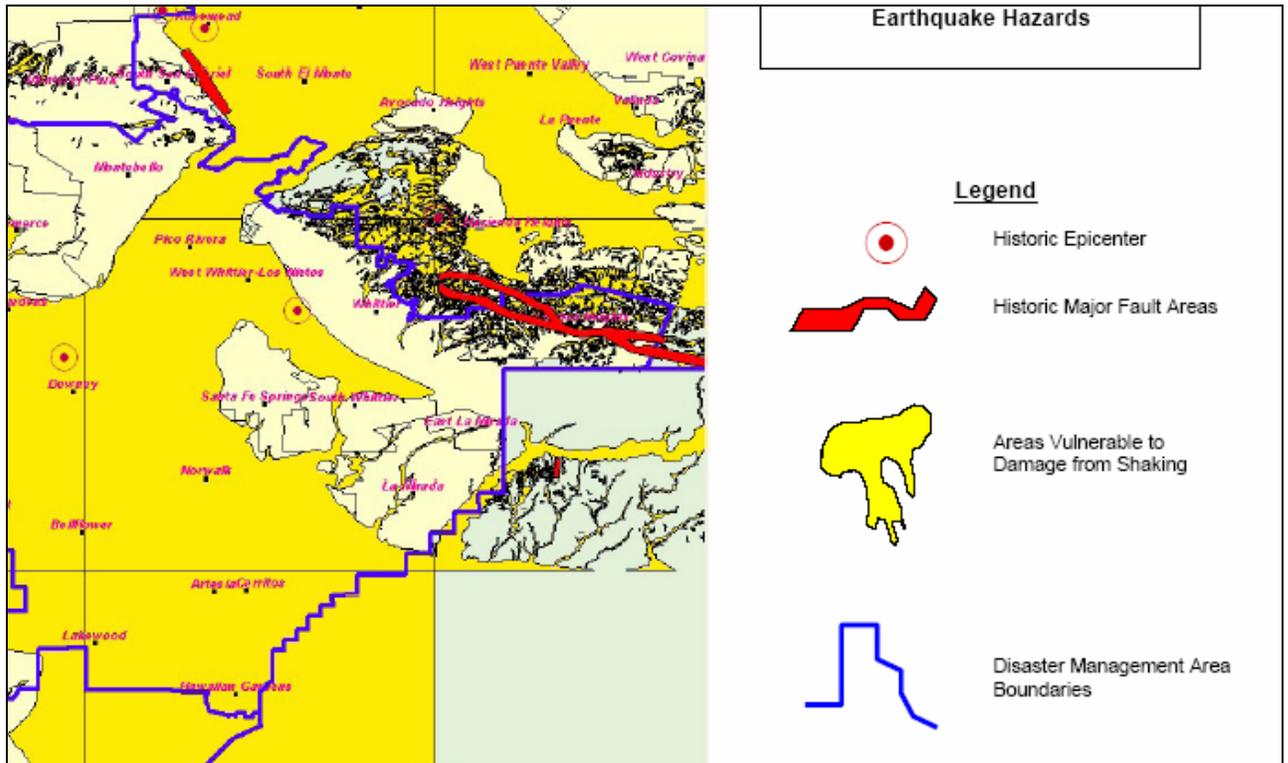
This fault dips at about 75 degrees to the north. There is evidence that at least eight surface-rupturing events have occurred along this fault in the last 36,000 years.

The exact nature of the slip along the Raymond Hill fault has been a subject of debate for quite some time. The fault produces a very obvious south-facing scarp along much of its length, and this has made

many favor reverse-slip as the predominant sense of fault motion. However, there are also places along this scarp where left-lateral stream offsets of several hundred meters can be seen.

The matter will not be conclusively resolved until the Raymond fault ruptures at the surface, but some new light was shed on the debate in late 1988, when the Pasadena Earthquake occurred. Apparently located on the Raymond fault, the motion of this quake was predominantly left-lateral, with a reverse component only about 1/15th the size of the lateral component. Curiously enough, this corresponds very well with a scarp height of about 30 meters (reverse slip) versus a left-lateral stream offset of about 400 meters (lateral slip), which are found along the scarp of the Raymond fault south of Pasadena.

Area Earthquake Hazard Map (Los Angeles County GIS Data)



Geology

STUDY AREA LOCATION AND PHYSIOGRAPHY

The Whittier Quadrangle covers an area of about 62 square miles in eastern Los Angeles and northwestern Orange counties. This includes all or parts of the cities of Artesia, Bellflower, Buena Park, Cerritos, Commerce, Downey, La Mirada, Montebello, Norwalk, Pico Rivera, Santa Fe Springs, and Whittier, as well as unincorporated areas of Los Angeles County. Major transportation routes traversing the Whittier Quadrangle include the Santa Ana Freeway (I-5), the San Gabriel River Freeway (I-605), the Artesia Freeway (State Highway 91), and the Century Freeway (I-105).

More than half of the quadrangle is covered with Holocene alluvial deposits of the regional coastal basin, also known as the Downey Plain. These deposits overlie an erosional surface of late Pleistocene age.

The main drainage courses within the quadrangle are the Rio Hondo and San Gabriel River. Both rivers flow from the main San Gabriel Valley through the Whittier Narrows. The Rio Hondo flows to the southwest and joins the Los Angeles River to the west of the quadrangle. The San Gabriel River flows southward across the entire quadrangle. Both of these rivers are channelized and have percolation basins associated with them. Additional channelized creeks include Coyote, La Mirada, Leffingwell, La Canada Verde, Savage, Worsham, Turnbull, and Arroyo Pescadero.

GEOLOGIC CONDITIONS

Surface Geology

The generalized geologic map used to evaluate the liquefaction potential of the Whittier Quadrangle is shown in Plate 1.1. This map was modified from a DMG digital compilation (Saucedo, 1996) that was produced in conjunction with the Southern California Areal Mapping Project (SCAMP). The Quaternary portion of the compilation (Foster, 1996) was derived from early soil surveys (Nelson and others, 1919; Eckmann and others, 1916). DMG staff modified some alluvium and bedrock contacts and reinterpreted some of the Quaternary units. These changes were based on use of 1:20,000-scale topographic maps (Alhambra, 1926; Artesia, 1925), 1:24,000-scale topographic maps (Bell, 1926; Whittier, 1925), and extensive subsurface borehole data. Map unit nomenclature follows the format developed by SCAMP (Morton and Kennedy, 1989).

The map shows that much of the study area is covered by alluvial sediments of Quaternary age. These deposits fall into three basic age groups: older alluvial fan deposits of Pleistocene age associated with the Coyote Hills, Puente Hills and Montebello Hills; younger alluvial fan deposits of Holocene and late Pleistocene age; and modern active wash and channel systems. One significant change made to the original digital map was to reassign a younger age (Holocene to late Pleistocene) to an alluvial fan unit originally mapped as older (Pleistocene). This unit is in

the vicinity of eastern Santa Fe Springs, southwestern Whittier and portions of Los Angeles County where Carmenita Avenue and Painter Road intersect. This reinterpretation was based on several cross sections constructed from subsurface borehole data.

The rocks exposed in the Puente Hills are chiefly claystone, siltstone, sandstone, and conglomerate of marine origin that belong to the Pliocene Fernando Formation and the late Miocene Puente Formation and are discussed in Section 2 of this report.

Subsurface Geology and Geotechnical Characteristics

Several hundred borehole logs from subsurface investigations within the Whittier Quadrangle were collected at the California Department of Transportation (Caltrans); the California Regional Water Quality Control Board - Los Angeles Region; DMG Environmental Review and Hospital Review Projects; and the U. S. Geological Survey (USGS). The USGS supplied copies of paper logs collected from the Los Angeles County Department of Public Works storm drain investigations. These logs were used in earlier liquefaction studies of the Los Angeles area (Tinsley and Fumal, 1985; Tinsley and others, 1985).

Lithologic, soil test, and related data from approximately 290 logs were entered into the DMG (Geographic Information System) database. The remaining logs were reviewed during this investigation to aid with the stratigraphic correlation. Locations of all exploratory boreholes entered into the database are shown on Plate 1.2. Cross sections were constructed from borehole data to correlate soil types and engineering properties, and to extrapolate geotechnical data into outlying areas containing similar soils.

Descriptions of characteristics of geologic units recorded on the borehole logs are given below. These descriptions are necessarily generalized but give the most commonly encountered characteristics of the unit.

Older alluvium (Qofa, Qofs, Qofc)

The older alluvium in the Whittier Quadrangle is exposed in portions of Montebello, Santa Fe Springs, La Mirada and Whittier. This material consists predominantly of alternating beds of medium-dense to very-dense sand, clay, and silt.

Younger alluvium (Qyfa, Qyfs, Qyfc, Qw)

In general, the younger Quaternary alluvial deposits consist of alternating beds of clay, silt, and very fine- to very coarse-grained sand and gravel. Compactness of sand layers ranges from very loose to dense, as indicated by both lithologic descriptions and penetration tests performed during drilling.

The young Quaternary alluvial fan deposits in the Whittier Quadrangle represent deposition predominantly by the San Gabriel and Rio Hondo rivers. This region has experienced multiple episodes of historic inundation during the past 150 years. Borehole data from within the actual channels are limited; the subsurface deposits consist of mostly very coarse- to very fine-grained

encountered water free of piezometric influences were plotted and contoured onto a map showing depths to historically shallowest ground water (Plate 1.2). This ground-water map captures the highest shallow ground water in perched, semi-perched, and other water table settings. This map was digitized and used for the liquefaction analysis. The map was compared to similar published maps for any major discrepancies (Tinsley and others, 1985; Leighton and Associates, 1990). Plate 1.2 shows that historical shallow water conditions (less than 40 feet depth) occurred throughout much of the Whittier Quadrangle.

In the late 1800's many shallow wells showed near-surface water levels, in addition to the wide spread deeper artesian conditions. The subsequent management and withdrawal of ground water markedly reduced the distribution of both of these conditions. This century's overall declining trend in water levels was reversed during the mid 1930's to mid 1940's due to increased precipitation rates. Hydrographs from this region show that water levels can vary seasonally as much as 35 feet. It is important to note that shallow water was encountered in geotechnical investigations (post-1960) throughout the Whittier Quadrangle.

Although the potential for recharge is beyond the scope of this report, the review of 100's of boreholes, as well as conclusions from the California Department of Water Resources (1961) and Tinsley and others (1985), all suggest that water could move upward into semi-perched zones if pressure levels in the underlying units become sufficiently high, due to the discontinuous character and high sand content of the confining units. Similarly, both the Rio Hondo River and the San Gabriel River have the potential to recharge ground water due to the percolation and flood control basins associated with them.

EVALUATING LIQUEFACTION POTENTIAL

Liquefaction occurs in water saturated sediments during moderate to great earthquakes. Liquefied sediments are characterized by a loss of strength and may fail, causing damage to buildings, bridges, and other such structures. A number of methods for mapping liquefaction hazard have been proposed; Youd (1991) highlights the principal developments and notes some of the widely used criteria. Youd and Perkins (1978) demonstrate the use of geologic criteria as a qualitative characterization of susceptibility units, and introduce the mapping technique of combining a liquefaction susceptibility map and a liquefaction opportunity map to produce liquefaction potential. Liquefaction susceptibility is a function of the capacity of sediments to resist liquefaction and liquefaction opportunity is a function of the seismic ground shaking intensity. The application of the Seed Simplified Procedure (Seed and Idriss, 1971) for evaluating liquefaction potential allows a quantitative characterization of susceptibility of geologic units. Tinsley and others (1985) applied a combination of the techniques used by Seed and others (1983) and Youd and Perkins (1978) for mapping liquefaction hazards in the Los Angeles region. The method applied in this study for evaluating liquefaction potential is similar to that of Tinsley and others (1985), combining geotechnical data analyses, and geologic and hydrologic mapping, but follows criteria adopted by the California State Mining and Geology Board (in press).

LIQUEFACTION OPPORTUNITY

According to the criteria adopted by the California State Mining and Geology Board (in press), liquefaction opportunity is a measure, expressed in probabilistic terms, of the potential for ground shaking strong enough to generate liquefaction. Analyses of in-situ liquefaction resistance require assessment of liquefaction opportunity. The minimum level of seismic excitation to be used for such purposes is the level of peak ground acceleration (PGA) with a 10% probability of exceedance over a 50-year period. The earthquake magnitude is the magnitude that contributes most to the acceleration.

For the Whittier Quadrangle, peak accelerations of 0.40 g to 0.58 g resulting from earthquakes of magnitude 6.7 to 6.8 were used for liquefaction analyses. The PGA and magnitude values were derived from maps prepared by Petersen and others (1996) and Cramer and Petersen (1996), respectively. See the ground motion portion (Section 3) of this report for further details.

LIQUEFACTION SUSCEPTIBILITY

Liquefaction susceptibility reflects the relative resistance of soils to loss of strength when subjected to ground shaking. Primarily, physical properties and conditions of soil such as sediment grain-size distribution, compaction, cementation, saturation, and depth govern the degree of resistance. Soils that lack resistance (susceptible soils) are typically saturated, loose

sandy sediments. Soils resistant to liquefaction include all soil types that are dry or sufficiently dense.

DMG's map inventory of areas containing soils susceptible to liquefaction begins with evaluation of geologic maps, cross-sections, geotechnical test data, geomorphology, and ground-water hydrology. Soil-property and soil-condition factors such as type, age, texture, color, and consistency, along with historic depths to ground water are used to identify, characterize, and correlate susceptible soils. Because Quaternary geologic mapping is based on similar soil observations, findings can be related to the map units. A qualitative susceptible soil inventory is outlined below.

Older alluvium (Qofa, Qofs, Qofc)

The older Quaternary sedimentary deposits of the Whittier Quadrangle are described in borehole logs as being dense to very dense sand, silt, and clay. In general, these deposits are considered to have low liquefaction susceptibility

Younger alluvium (Qyfa, Qyfs, Qyfc, Qw)

Younger alluvial fan deposits within the Whittier Quadrangle consist largely of sand, along with lesser amounts of silty sand, silt, gravel and clay. Most borehole descriptions and test data from these units report the presence of loose to moderately dense sand. Some deposits consist of very loose sand. Where historical ground-water levels are within 40 feet of the surface, these deposits are assigned a high liquefaction susceptibility rating.

QUANTITATIVE LIQUEFACTION ANALYSIS

DMG performs quantitative analysis of geotechnical data to evaluate liquefaction potential using the Seed Simplified Procedure (Seed and Idriss, 1971; Seed and others, 1983; Seed and Harder, 1990; Youd and Idriss, 1997). This procedure calculates soil resistance to liquefaction, expressed in terms of cyclic resistance ratio (CRR) based on standard penetration test (SPT) results, ground-water level, soil density, moisture content, soil type, and sample depth. CRR values are then compared to calculated earthquake-generated shear stresses, expressed in terms of cyclic stress ratio (CSR). The factor of safety (FS) relative to liquefaction is: $FS=CRR/CSR$. FS, therefore, is a quantitative measure of liquefaction potential. Generally, a factor of safety of 1.0 or less, where CSR equals or exceeds CRR, indicates the presence of potentially liquefiable soil. DMG uses FS, as well as other considerations such as slope, free face conditions, and thickness and depth of potentially liquefiable soil, to construct liquefaction potential maps, which then directly translate to Zones of Required Investigation.

Approximately 90 percent of the borehole logs collected for alluviated areas in the Whittier Quadrangle contained sufficient information to qualify for liquefaction analyses using the Seed Simplified Procedure. In areas where no blow counts were recorded, qualitative descriptions of "moderately dense," "loose" or "very loose" sandy soils or of caving into open boreholes were considered indicators of liquefaction-susceptible sediments.

Criteria for Zoning

The areas underlain by late Quaternary geologic units were included in liquefaction zones using the criteria developed by the Seismic Hazards Mapping Act Advisory Committee and adopted by the California State Mining and Geology Board (in press). Under those criteria, liquefaction zones are areas meeting one or more of the following:

1. Areas known to have experienced liquefaction during historic earthquakes.
2. All areas of uncompacted fills containing liquefaction susceptible material that are saturated, nearly saturated, or may be expected to become saturated.
3. Areas where sufficient existing geotechnical data and analyses indicate that the soils are potentially liquefiable.
4. Areas where existing geotechnical data are insufficient.

In areas of limited or no geotechnical data, susceptibility zones may be identified by geologic criteria as follows:

- a) Areas containing soil deposits of late Holocene age (current river channels and their historic floodplains, marshes and estuaries), where the M7.5-weighted peak acceleration that has a 10% probability of being exceeded in 50 years is greater than or equal to 0.10 g and the water table is less than 40 feet below the ground surface; or
- b) Areas containing soil deposits of Holocene age (less than 11,000 years), where the M7.5-weighted peak acceleration that has a 10% probability of being exceeded in 50 years is greater than or equal to 0.20 g and the historic high water table is less than or equal to 30 feet below the ground surface; or
- c) Areas containing soil deposits of latest Pleistocene age (between 11,000 years and 15,000 years), where the M7.5-weighted peak acceleration that has a 10% probability of being exceeded in 50 years is greater than or equal to 0.30 g and the historic high water table is less than or equal to 20 feet below the ground surface.

Application of SMGB criteria for liquefaction zoning in the Whittier Quadrangle is summarized below.

Areas of Past Liquefaction

Historic liquefaction has not been reported in the Whittier Quadrangle. Evidence of paleoseismic liquefaction was not found. Therefore, no areas within the Whittier Quadrangle are zoned for potential liquefaction hazard based on historic liquefaction.

Damage Estimation

According to the Pico Rivera General Plan a major earthquake in or near Pico Rivera would result in many casualties and extensive (estimated at 28% of total asset value) property damage. The time of day and season of the year could have a profound effect on the number of injuries and the amount of damage sustained.

The majority of the buildings in the city were built after the enactment of the 1952 Building Code which included strict seismic provisions.

Earthquake damage in Modified Mercalli Scale range of VII and greater would be felt by everyone in the area and would cause glass breakage as well as considerable damage in poorly built structures. If the maximum intensity would rise to VIII on the Mercalli Scale, the damage would escalate to *slight* to well built structures. Poorly built structures would be heavily damaged with collateral damage of walls, chimneys and monuments falling. (See the Modified Mercalli Scale)

Earthquake Size Descriptions		
Descriptive Title	Richter Magnitude	Intensity Effects
<i>Minor Earthquake</i>	1 to 3.9	Only observed instrumentally or felt only near the epicenter.
<i>Small Earthquake</i>	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.
<i>Moderate Earthquake</i>	6 to 6.9	Moderate to severe earthquake range; fault rupture probable.
<i>Major Earthquake</i>	7 to 7.9	Landslides, liquefaction and ground failure triggered by shock waves.
<i>Great Earthquake</i>	8 to 8+	Damage extends over a broad area, depending on magnitude and other factors.

The Modified Mercalli Scale

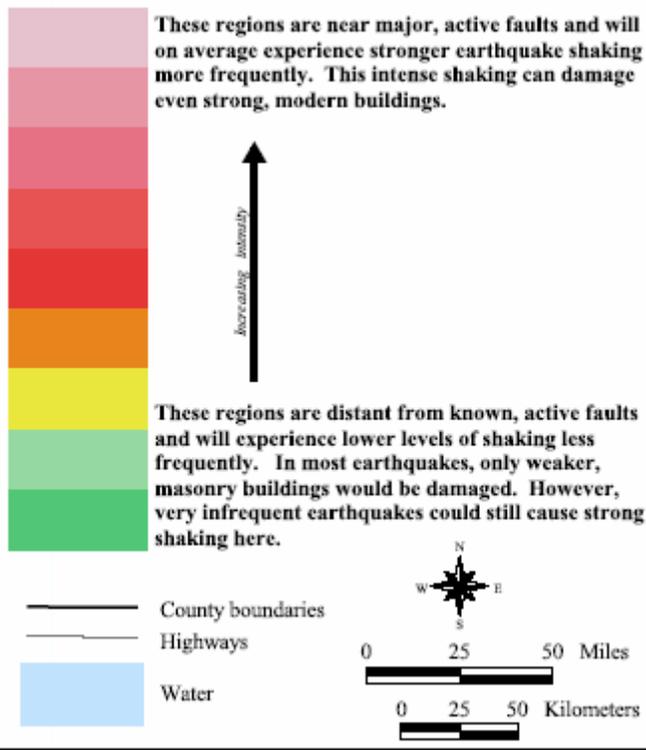
The Modified Mercalli Scale (Roman numerals I-XII) is used to measure the intensity of an earthquake in a particular area. It differs from the Richter Scale, which measures the energy release by an earthquake.

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 is 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.

Earthquake Shaking Potential Map for Southern California



Level of Earthquake Hazard



Severe Weather

The Planning Jurisdictions rated this as a high priority risk

Windstorms

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

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

Santa Ana Winds

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

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



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

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

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

Hazard Extent

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

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

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

Vulnerabilities

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

Life and Property

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

Utilities

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

Infrastructure

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

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

Transportation

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

Increased Fire Threat

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

Losses

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

Existing Mitigation

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

California Code

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

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

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

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

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

The following California Public Utilities Commission section has additional guidance:

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

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

El Niño

Shelters

The El Niño '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 Niño 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 to 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.

Impact

Based on previous El Nino damage in Pico Rivers, it is estimated that a year similar to 1995 and 1997 would bring approximately 12% total losses based on asset value.

Transportation Loss

The Planning Jurisdictions rated this as a high priority risk

Transportation disruption and loss in Los Angeles County have the potential for catastrophic consequences on the populace. The area's heavy reliance on conveyances is a major factor in economic stability and survival during emergencies. Los Angeles County's transportation corridor interconnections link all parts of the county to neighboring jurisdictions and their stability and dependability is necessary to assure population health and welfare in an emergency. A catastrophic loss or extended disruption in any of the transportation forms listed below could have severe and long-lasting impacts on the area's economy and health.

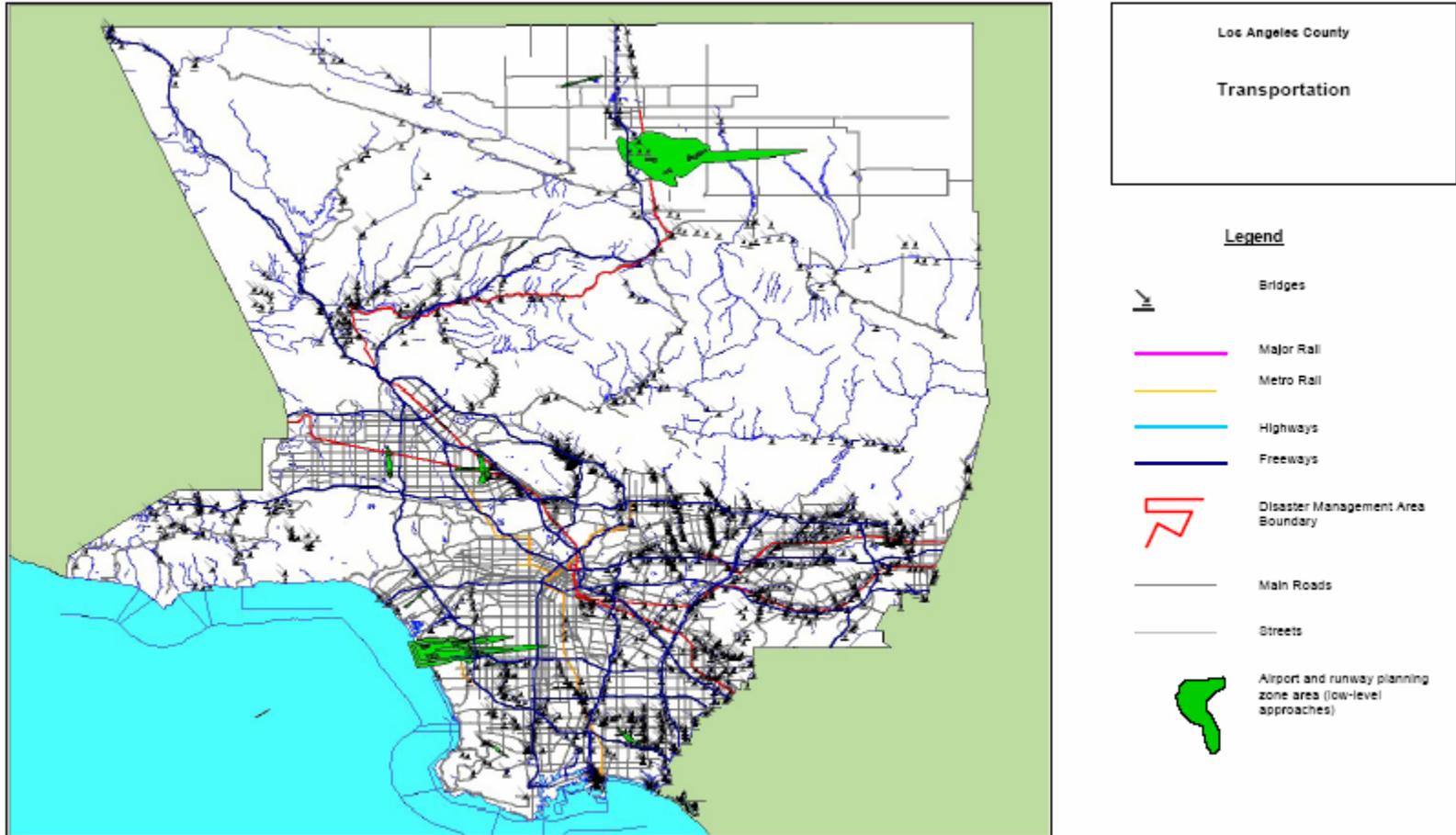
Roads, Road Miles, Motor Vehicles, & Drivers in L.A. County

- Los Angeles County has over 600 miles of freeway and 382 miles of conventional highway.
- On the average day, 92 million vehicle miles are driven in L.A. County.

Type of Vehicle Registrations	2000	1999	1998
Autos	5,134,168	4,935,605	4,825,512
Trucks	1,021,397	991,315	970,993
Trailers	283,402	283,402	262,506
Motorcycles	81,167	75,569	74,210
Total	6,520,134	6,290,976	6,133,221

Note: More than 600,000 cars are sold in Southern California every year, according to J.D. Powers & Associates of Agoura Hills and Calif. DMV

Los Angeles County Transportation Map Los Angeles County GIS Data



CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

System	Ridership	Vehicles in Operation at Peak Weekday Usage	Year Founded	Contact (Telephone)
MTA* - Motor Bus	347,451,286	1,888	1958	1-800-COMMUTE TTY 1-800-252-9040 213-922-6000 (main)
MTA* - Street Car	25,669,552	51	1990	same as above
MTA* - Rapid Rail	19,612,940	58	1993	same as above
Long Beach Transit	26,255,487	151	1963	562-591-2301
Santa Monica's Big Blue Bus	22,057,734	134	1928	310-451-5444
Foothill Transit	16,273,000	259	1988	1-800-RIDE-INFO TTY (626) 967-3147
Montebello Transit	7,356,606	46	1930	323-887-4600
Southern California Regional Rail Authority (MetroLink)	6,978,588	133	1992	1-800-371-LINK TTY 1-800-698-4TDD
Gardena Municipal Bus Lines	6,136,864	39	1940	(800) 266-6883 Maps & Schedules: (323) 321-0165
Culver City Transit	4,525,307	27	1928	310-253-6500 TTY 310-253-6548
Torrance Transit	4,509,300	43	1940	1-800-266-6883
Antelope Valley Transit Authority	2,216,090	36	1992	661-945-9445 ext. 200
Santa Clarita Transit	2,321,035	48	1991	661-294-1287
Norwalk Transit	1,434,335	15	1974	562-929-5550
Los Angeles Department of Transportation (LADOT) (Commuter Express; Community Connection; DASH)	3,356,943	88	1976	(213, 310, 323 or 818) 808-2273 TTY 1-800-252-9040
Commerce Municipal Bus Lines	957,405	6	1960	323-887-4419
DowneyLINK Public Transit Service	306,308	6	1994	562-904-5465
Palos Verdes Transit Authority	123,322	13	1995	310-544-7108
Cerritos on Wheels (COW)	n/a	n/a	n/a	562-928-4COW

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

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
36,847 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 <i>(Southern California Regional Rail Authority)</i>	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 <i>(owned by Burlington Northern Santa Fe Railway)</i>	Freight	4433 Exchange Ave, Los Angeles 90058 (323) 277-2001
Union Pacific Railroad Company	Freight	13181 Crossroads Parkway North #500, City of Industry 91746 (626) 935-7602

**Daily Truck & Train Movements to/from Los Angeles/Long Beach Harbor
1990, 2000 & Projections**

Year	Truck Movements	Train Movements
1990	20,000	30
2000	25,000	50
2010	33,000	70
2020	50,000	100

Alameda Corridor Project

It is estimated that Los Angeles and Long Beach harbors will have double the current volume of incoming ocean freight traffic by the year 2020. The Alameda Corridor Project, started in 1997, was planned to divert much of this traffic from local freeways and street-level railroad crossings and provide, by the year 2002, a 20-mile express rail link between the Los Angeles and Long Beach harbors and the rail yards in Vernon. The \$2.4 billion project will consolidate the operations of the Union Pacific and Burlington Northern Santa Fe railroads. Street level railroad crossings along Alameda Street will be eliminated and half of the route will run below street level. The project is under the direction of the Alameda Corridor Transportation Authority.

Route	Major Stops
Coast Starlight	Los Angeles-San Jose-Oakland-Sacramento-Portland-Seattle
Pacific Surfliner	San Diego-Anaheim-Los Angeles-Ventura-Santa Barbara-San Luis Obispo
Southwest Chief	Los Angeles-Flagstaff-Albuquerque-Topeka-Kansas City-Chicago
Sunset Limited	Los Angeles-Tucson-EI Paso-San Antonio-Houston-New Orleans-Mobile-Jacksonville-Orlando, Florida

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

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

Utility Disruption/Loss

The Planning Jurisdictions rate this risk as a high priority. It must be noted however, the jurisdictions are constrained from impacting gas, electrical and sanitary services utilities.

Gas

Gas transmission lines normally follow power and railroad right away and we can assume that is also the case in Pico Rivera. In today's security Climate we cannot publish the routes of those transmissions lines.

Electrical

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.

Pico Rivera is served by Southern California Edison and have experienced a high incidence of power failures from that utility. In addition to power failures, Edison has 4 high tension lines that traverse Pico Rivera. Southern California Edison has released the following document on their emergency service and preparedness. Following major earthquakes such as the Whittier Narrows quake, Southern California Edison experience failures in their high transmission towers, causing some to collapse. (FEMA report on Whittier Earthquake) While Pico Rivera and its Planning Jurisdictions consider energy loss and failure a High Priority Threat, they realize they are almost powerless to affect the safety of the Utility Companies and can only implement emergency power generators to provide power when Edison experiences outages and rolling blackouts.

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.

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.

Southern California Edison's Statement

"The Federal Emergency Management Agency's Hazard Mitigation Planning Program encourages integrated planning between utilities and the cities and counties they serve.

In order to meet the hazard mitigation planning needs of communities we serve, we have developed this document to provide an overview of our own hazard mitigation and planning process. You may use this

document within your local planning process to affirm that we at Southern California Edison (SCE) have taken the necessary pre-disaster steps to mitigate threats to our electric system.

SCE is committed to providing reliable electric service to our customers. We have an emergency preparedness program in place to address pre- and post-disaster planning needs. Additionally, we have developed the necessary plans to allow SCE to communicate post-disaster with the jurisdictions we serve and, as necessary, to integrate our response activities with theirs. Finally, we have assessed the vulnerability of our equipment to hazards such as earthquakes, and have taken steps to mitigate that vulnerability.

While some local governments may feel it desirable to have detailed information regarding the placement, operations and purpose of some or all of SCE's facilities located within their borders, SCE is not able to provide this level of information and does not believe it is necessary. Providing information regarding critical facilities or any specific points of vulnerability would not allow us to maintain the confidentiality of such information that is essential to maintaining the security of the system in the face of particular threats to it.

Utility Planning

The California Public Utilities Commission (PUC), which regulates SCE, has devoted considerable attention to disaster preparedness and system response. SCE has undertaken an all-hazards approach to planning for an emergency event. The plans are updated annually and employees are trained on these plans. Plan contents are specified by the PUC's General Order No. 166, Standards for Operations, Reliability, and Safety during Emergencies and Disasters. A summary of General Order No. 166 is attached.

SCE's Emergency Response & Recovery Plan provides a framework for coordinating and integrating the response and recovery for all of SCE's business units and departments during emergency situations, in order to meet our goal of providing reliable electric service. As an event begins to develop and increase in magnitude, SCE takes the appropriate actions to increase its readiness. Actions taken during normal operations are elevated to respond to a more serious situation. These increased actions may include:

- Activation of Emergency Response & Recovery Plans
- Activation of the Emergency Information Coordination Center, Emergency Operation Center, or Mobile Command Center
- Mobilization of resources such as manpower and equipment
- Escalation of the amount of material and equipment on hand
- Communication of emergency and safety information to the public

Testing the Plans

SCE tests its plans annually through a corporate emergency preparedness exercise. Hundreds of employees from organizations across the company participate in these exercises. In addition to this annual exercise, the company also conducts "tabletop" exercises that provide an opportunity to discuss and walk through our plans for response to specific emergency events. Two examples of recent exercise scenarios are the introduction of a computer virus to our system and response to an emergency declared by the California Independent System Operator that resulted in rotating electric service outages. We conduct other drills of a smaller scale throughout the company to test and train on specific emergency response procedures.

SCE also conducts an annual test of our Outage Notification Communication (ONC) system which is used to notify cities and counties of rotating outages.

SCE is committed to the safety and welfare of our employees. We train our employees through an annual Drop, Cover, & Hold Drill combined with an Evacuation Drill. These drills allow us to test our processes. Conducted at every company facility, these drills ensure that we reach the maximum number of employees possible. As part of the drill, selected employees from our engineering and facilities staff are organized and trained to provide building damage assessment immediately after major emergency events.

Mutual Assistance

If an outage is of such proportions that customers are projected to be without service for an extended period of time and additional resources will significantly reduce that restoration time, SCE may request mutual assistance from other utilities to supplement Southern California Edison (SCE) crews. To assist in service restoration, SCE has entered into agreements with neighboring utilities through the California Utilities Emergency Association's Mutual Assistance Agreement. During such emergencies, SCE management may request to have crews of qualified electrical workers from these utilities sent to supplement SCE crews. SCE will also utilize the resources of organizations whose primary business is to supplement the workforce of electrical utilities with contract labor.

External Coordination

SCE has a long-standing relationship with the counties we serve. We meet regularly to keep local officials informed of ongoing issues related to the electric industry within California. Should it be necessary, direct contact information has been provided to appropriate county agencies. During an actual emergency, designated SCE representatives will be stationed at the affected county's Emergency Operations Center.

SCE is an active member of several operational area Terrorism Early Warning Groups, the Police Officer's Association of Los Angeles County, and the Chief Special Agents, along with a host of other state and federal organizations whose purpose is to share intelligence information. We are an active member of the California Utilities Emergency Association, providing coordinated utility response to major events. We are a leader in the Business and Industry Council for Emergency Planning and Preparedness, an organization devoted to enhancing emergency preparedness and contingency planning. We are supportive of the Emergency Preparedness Commission for the County and Cities of Los Angeles. We are active members of the state and many local Fire Safe Councils and other organizations devoted to enhancing the response capabilities of fire agencies. We are also active in numerous other organizations at the state and federal level and supporting the activities of the counties we serve.

SCE also provides educational brochures to its customers and contacts regarding electrical safety, generator safety, power outages, and many programs the company offers.

Mitigation

SCE's service territory is an area of high seismic activity. The company has specifically acted to mitigate the impacts of a seismic event on our electrical system. Recognizing that the location, time and magnitude of an earthquake cannot be precisely predicted, we forecast the maximum magnitudes and approximate boundaries of earthquakes on a probability basis by reviewing:

- Geological data and studies of earthquake records
- Depth, direction, geologic formation, location and proximity of faults that can induce earthquakes
- Accumulation of energy on a specific fault since its last major eruption

Some of the activities we have undertaken to mitigate potential damage include:

- Reinforcement of existing equipment / structures

- Shock absorbing capability was added at base of transformer bushings.
- Anchorages were reinforced at base of transformers.
- Braces were added at bottom of transformer radiators.

Changes in equipment layouts to reduce interactions among substation equipment

- Surge arrestors were relocated away from transformers to independent supports.
- Extra length of conductors (cables) was provided between equipment.
- Adoption of seismic-safe models and new material
- Life tank circuit breakers were replaced with dead tank circuit breakers at every opportunity to lower the center of gravity and reduce internal seismic loads.
- Conventional porcelain insulators were replaced with polymer / silicon rubber insulators in selective applications to reduce seismic loads.
- High-strength insulators are used more generously throughout the system.

Continuous upgrades to engineering design criteria based on the latest industrial progress, geotechnical findings, and Code revisions. For instance, Dynamic Shake Table Tests were recently made mandatory for certain equipment in addition to analytical design.

It is not economical, if even possible, to build an electric system which is impervious to earthquake damage. Instead, SCE focuses its efforts on mitigating earthquake damage within reasonable costs in order to minimize the loss of electric service when earthquake damage occurs. One such effort is an SCE program to utilize information related to equipment and locations of vulnerability in the electric system to make resources available to minimize the time needed to bring the system back to service.

We work closely with other utilities, organizations, research institutes, and manufacturers on earthquake-related tasks. Some of these activities are:

- Tri-Net earthquake monitoring system of the California Institute of Technology provides updated earthquake data and information electronically. We are then able to use this data to determine probable areas of damaged facilities.
- PEER (Pacific Earthquake Engineering Research), a joint effort of electric utilities on the west coast of the United States and Canada. This provides SCE:
 - Channels to exchange technical information and experiences among utilities.
 - Opportunities to influence the seismic design criteria used by substation equipment manufacturers through joint purchase power.

As a member of IEEE (Institute of Electrical & Electronics Engineers) Subcommittee 693, SCE contributes to the development of IEEE's Recommendations and Standards of Substation Equipment Seismic Design.

Summary of General Order No. 166

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Standards for Operation, Reliability, and Safety

During Emergencies and Disasters

Adopted July 23, 1998. Effective July 23, 1998.

(D.98-07-097 in R.96-11-004)

Revised May 4, 2000 Effective May 4, 2000

(D.00-05-022 in R.96-11-004)

Applicability: This General Order applies to all electric utilities subject to the jurisdiction of the CPUC with regard to matters relating to electric service reliability and/or safety.

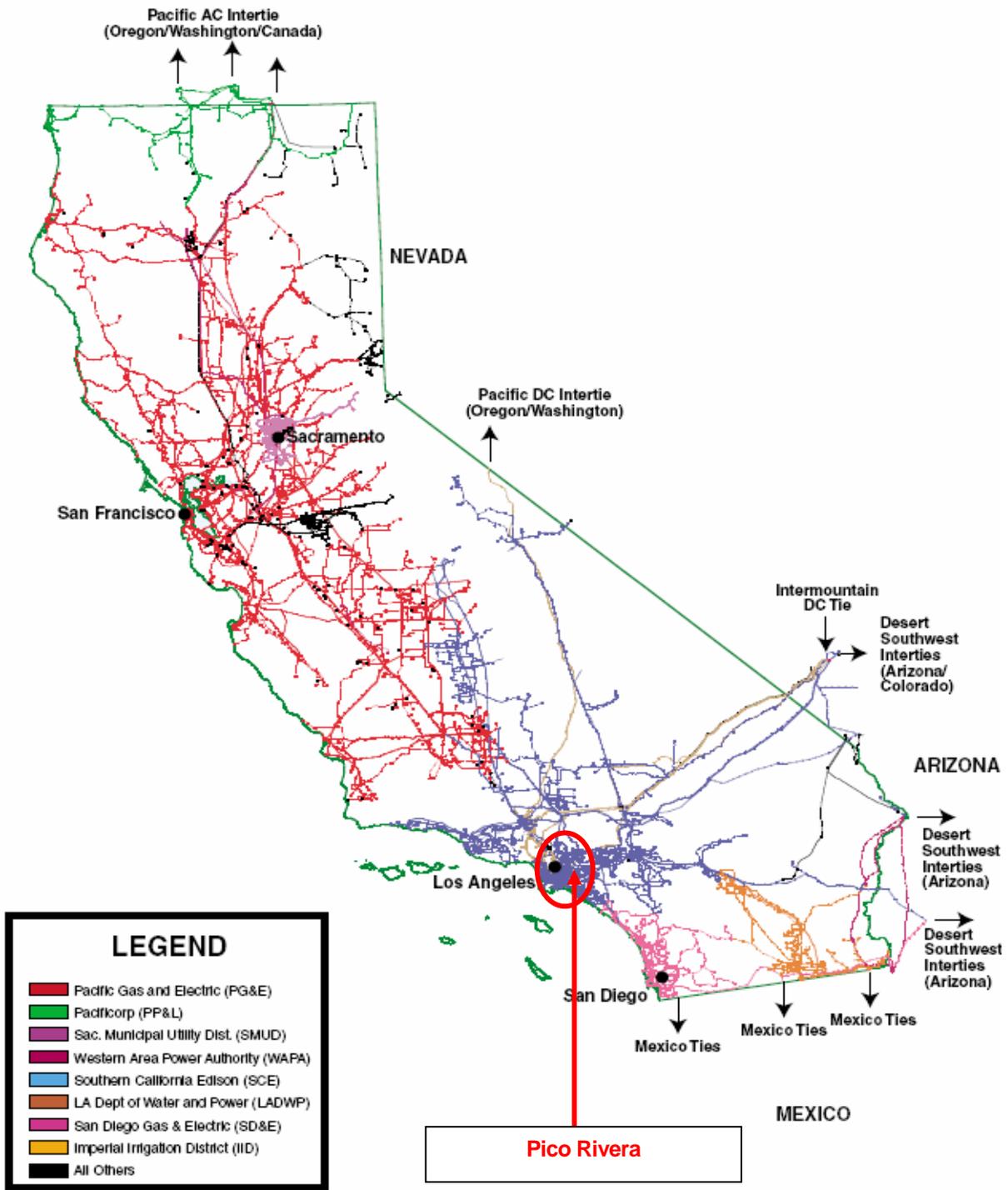
Purpose: The purpose of these standards is to insure that jurisdictional electric utilities are prepared for emergencies and disasters in order to minimize damage and inconvenience to the public which may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. The standards will facilitate the Commission's investigations into the reasonableness of the utility's response to emergencies and major outages. Such investigations will be conducted following every major outage, pursuant to and consistent with Public Utilities Code Section 364(c) and Commission policy.

Summary: The following rules require each jurisdictional electric utility to:

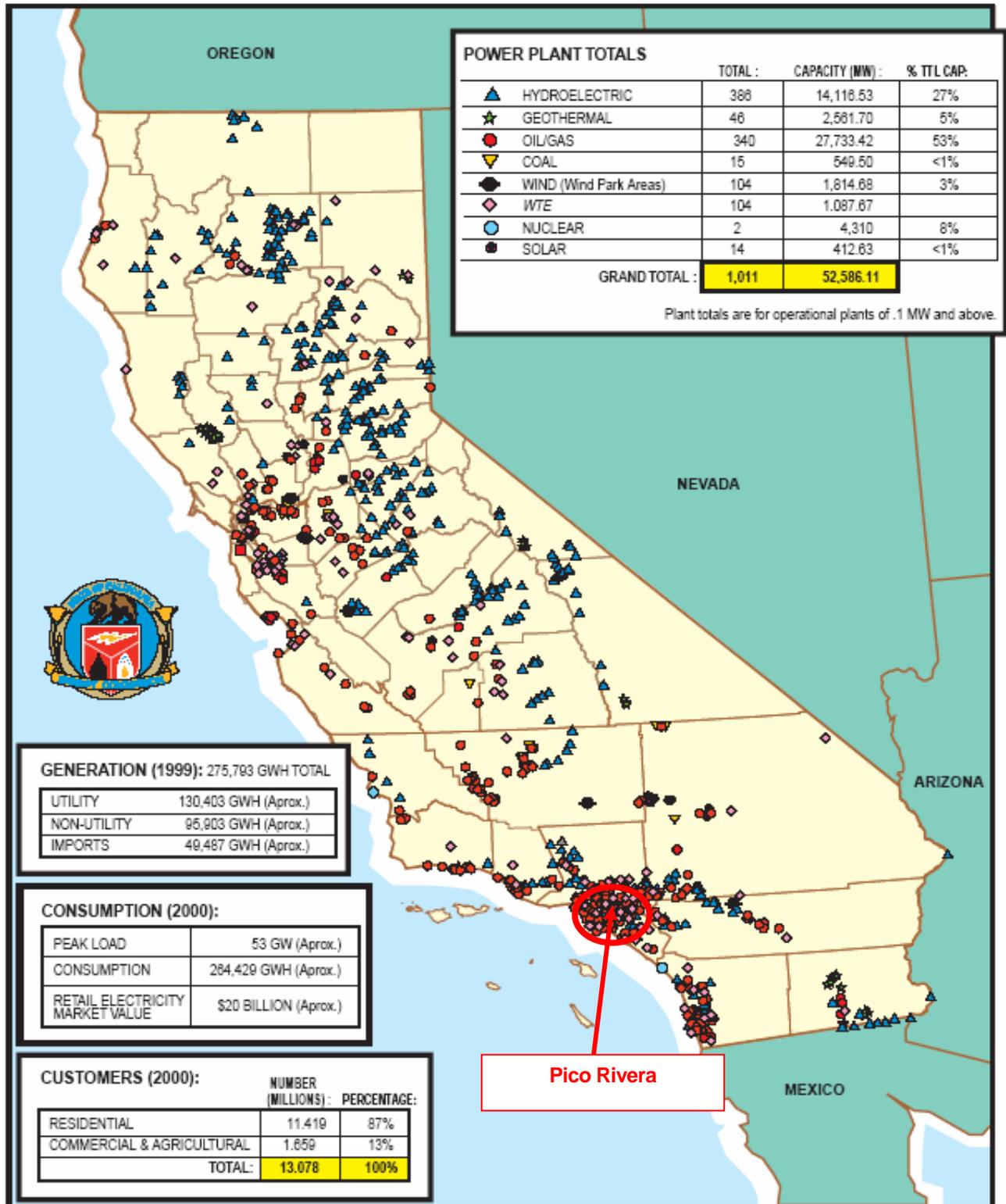
- Prepare an emergency response plan and update the plan annually. Standard 1.
- Enter into mutual assistance agreements with other utilities. Standard 2.
- Conduct annual emergency training and exercises using the utilities emergency response plan. Standard 3.
- Develop a strategy for informing the public and relevant agencies of a major outage. Standard 4.
- Coordinate internal activities during a major outage in a timely manner. Standard 5.
- Notify relevant individuals and agencies of an emergency or major outage in a timely manner. Standard 6.
- Evaluate the need for mutual assistance during a major outage. Standard 7.
- Inform the public and relevant public safety agencies of the estimated time for restoring power during a major outage. Standard 8.
- Train additional personnel to assist with emergency activities. Standard 9.
- Coordinate emergency plans with state and local public safety agencies. Standard 10.
- File an annual report describing compliance with these standards. Standard 11.
- Be subject to a restoration performance benchmark for major outages. Standard 12.
- Be subject to a call center performance benchmark for major outages. Standard 13.

The following map demonstrates the large almost undistinguishable number of power transmission lines that are in and near Pico Rivera. The reliability of those lines is of a concern to the surrounding jurisdictions. The constraint to planning for failure of the system is the specific lack of information supplied by the power companies in the post 911 terrorism environment.

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
 VERSION 1.1 (NOVEMBER 2004)



CALIFORNIA'S ELECTRICITY MARKET



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CALIFORNIA ENERGY COMMISSION - SYSTEMS ASSESSMENT & FACILITIES SITING DIVISION

APRIL 2001

Water/Waste Water Emergency

The Planning Jurisdictions rate this risk as a high priority.

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.

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.

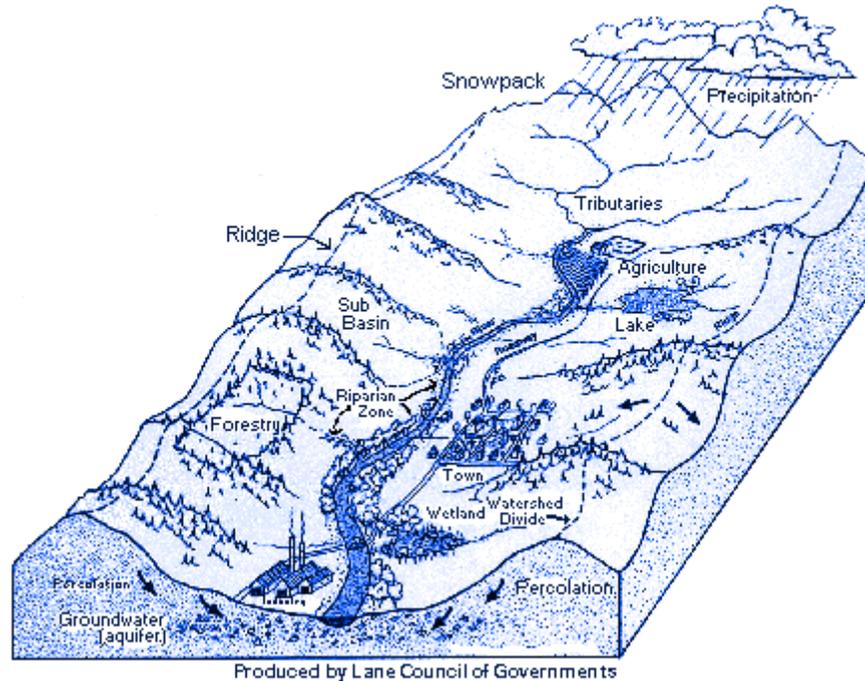
California Dept. of Water Resources, Water Education Foundation, Natural Resources Defense Council

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."

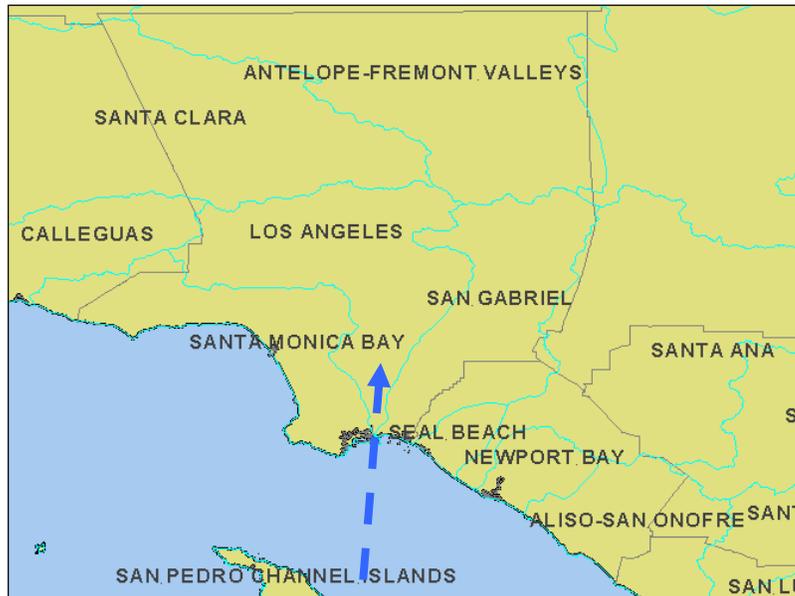
Watersheds come in all shapes and sizes. They cross county, state, and national boundaries. No matter where you are, you're in a watershed!



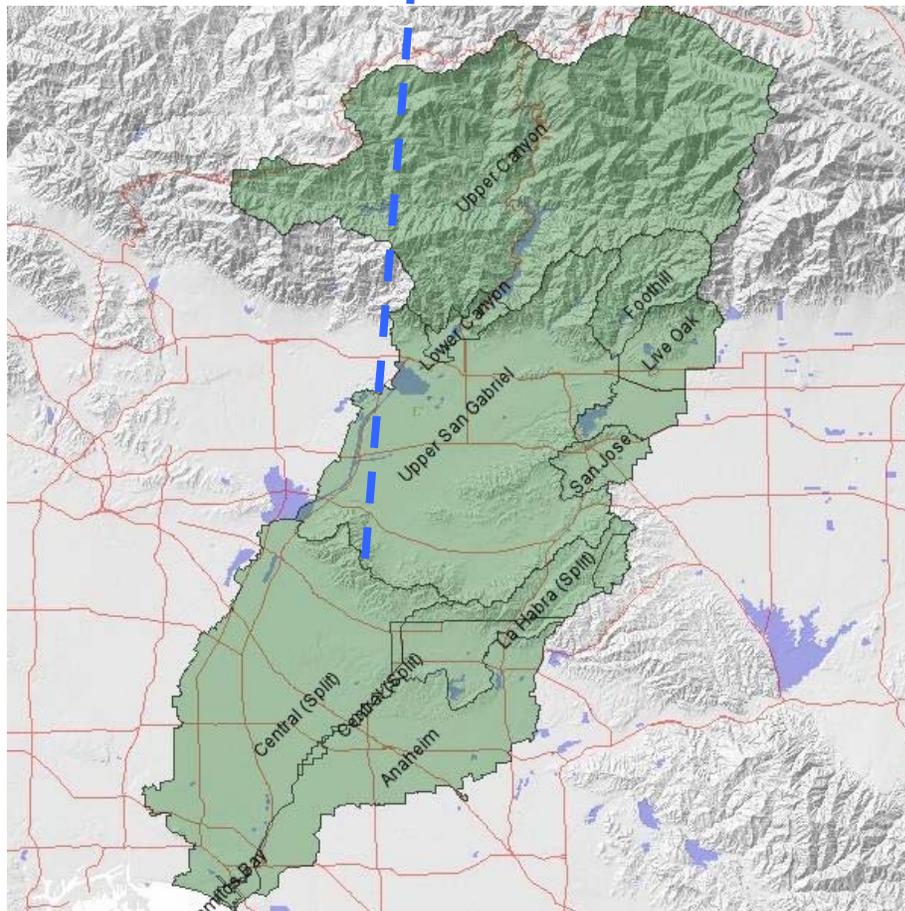
There are 6 watersheds serving Los Angeles County; Antelope-Fremont Valleys, Santa Clara, Los Angeles, San Gabriel, Santa Monica Bay, and San Pedro/Channel Islands (see map on next page).

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

Watersheds in Los Angeles County



San Gabriel Water Shed



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 water body 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 water body'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 (well field) 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 water body (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 water body they affect.

Threats to Groundwater

Threats to Quantity

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
- Changes 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, swimmable, 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 base flow
- 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 naphthalene 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.

Non-point sources refer to widespread, seemingly insignificant amounts of pollutants which, cumulatively, threaten water quality and natural systems. Examples of non-point sources include septic systems, agriculture, construction, grazing, forestry, recreational activities, careless household management, lawn care, and parking lot and other urban runoff.

Non-point 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 non-point 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

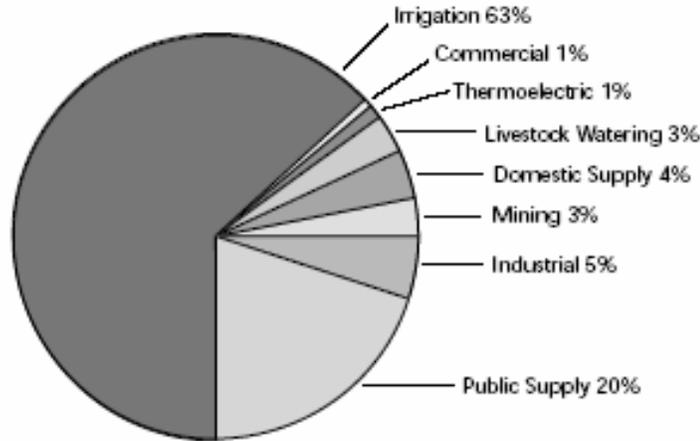
Zoning Districts	Practices
Groundwater recharge	Impervious area restriction
Artificial wetlands	Grass lined channels
Impoundment structures (ponds)	Subsurface drains (tiles)
Infiltration trenches	Native tree and shrub plantings
Pollutant reduction	Buffer strips
Filter strips	Riparian zones
Pollution 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.

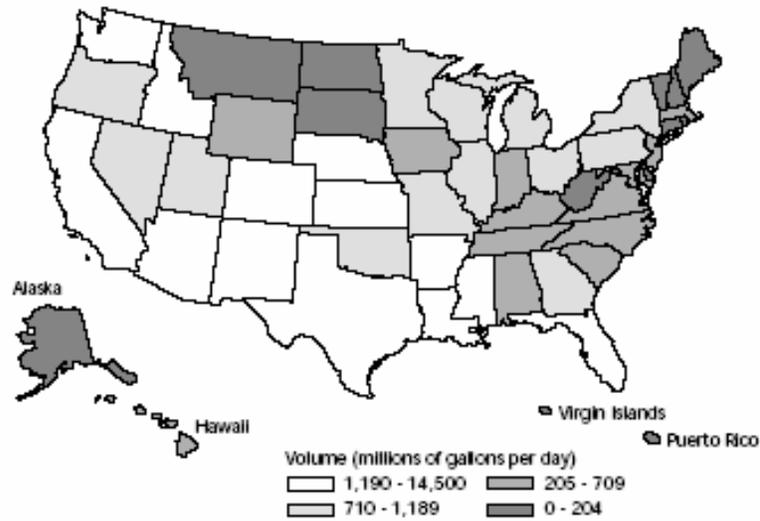
Every state uses some amount of ground water. Nineteen states obtain more than 25% of their overall water supply from ground water. Ten states obtain more than 50% of their total water supply from ground water.

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.

Figure 2

Ground Water Withdrawals by State in 1995



Source: *Estimated Use of Water in the United States in 1995*.
U.S. Geological Survey Circular 1200, 1998.

Sources of Ground Water Contamination

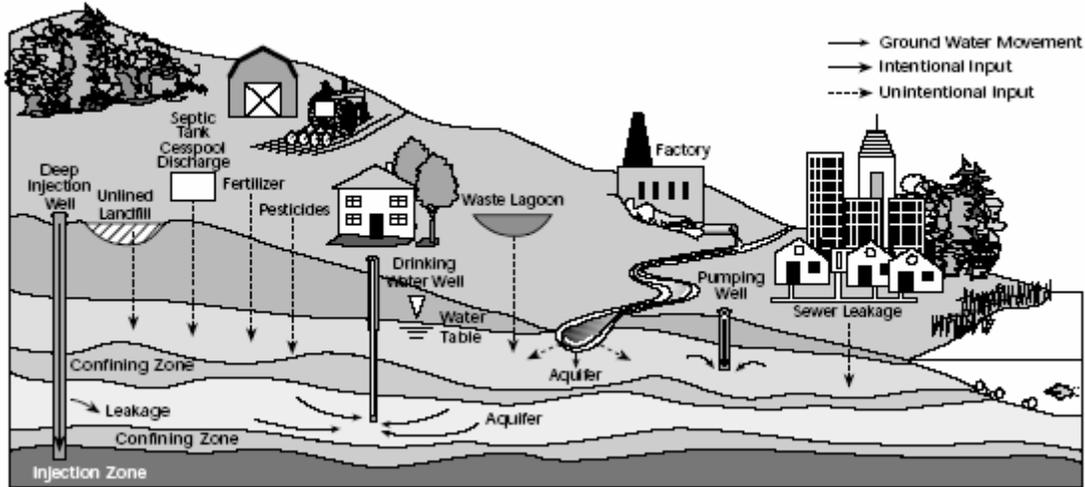
Ground water quality may be adversely impacted by a variety of potential contaminant sources. It can be difficult to identify which sources have the greatest impact on ground water quality because each source varies in the amount of ground water it contaminates. In addition, each source impacts water 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

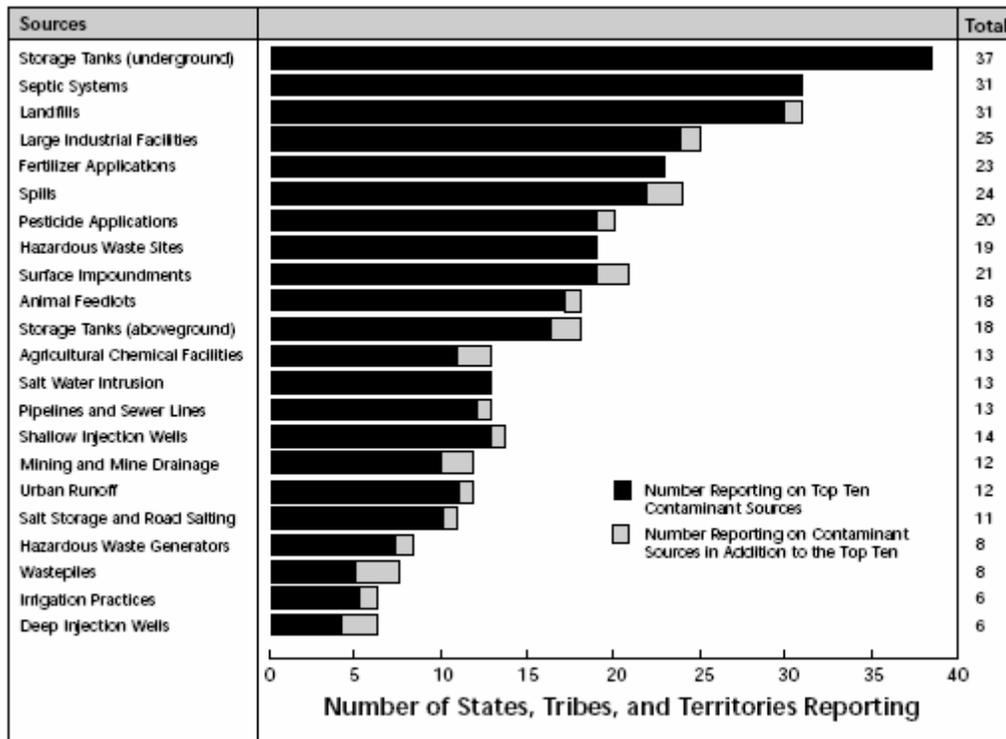
- The location relative to ground water sources used for drinking water purposes
- The size of the population at risk from contaminated drinking water
- The risk posed to human health and/or the environment from releases
- Hydro-geologic sensitivity (the ease with which contaminants enter and travel through soil and reach aquifers)
- The findings of the state's ground water assessments and/or related studies.

Ground Water Protection

Sources of Ground Water Contamination



Major Sources of Ground Water Contamination



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.

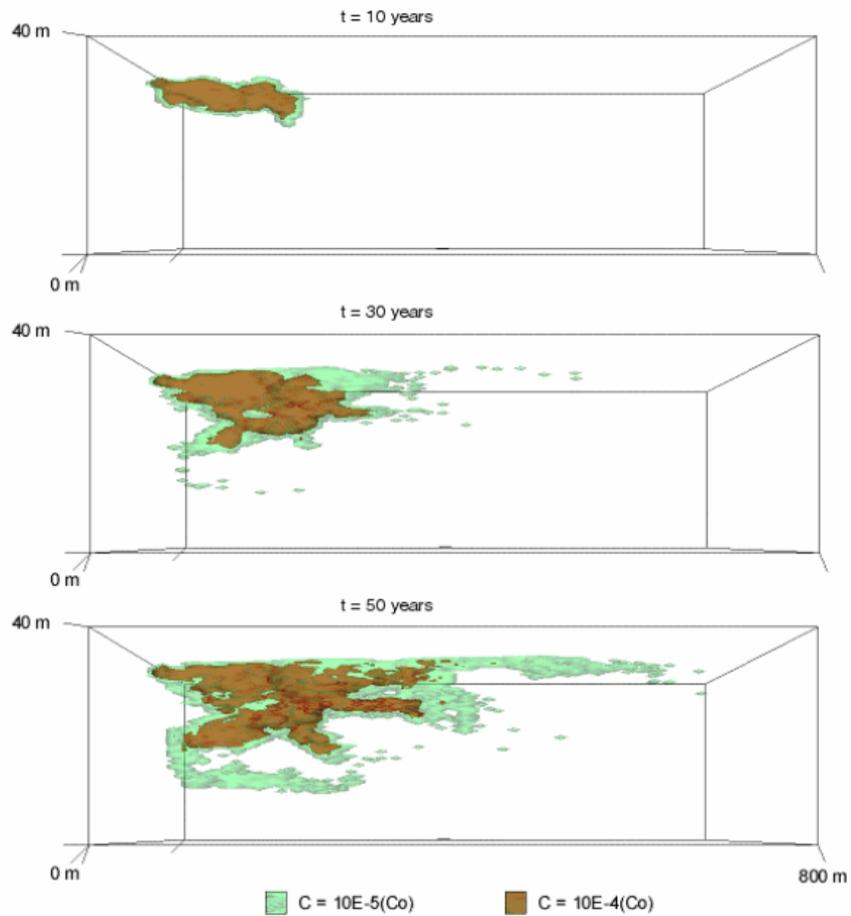
A recent investigation into the impacts of MTBE on California groundwater by Happel et al. (1998) provided an important foundation for this study. The analysis of groundwater impacts contained herein complements the work of Happel et al. (1998) by accumulating more recent statewide information with broader 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).

Impacts of MTBE on Groundwater



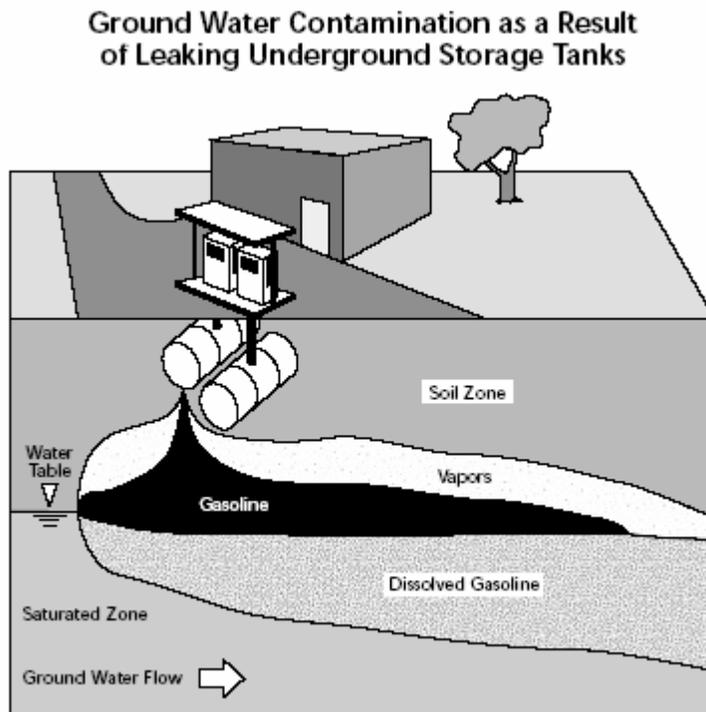
3-D simulated MTBE plume snap shots at (top to bottom) 10, 30, and 50 yr. Total thickness of the box is 40.5 m, and total length is 810 m. Regional flow is left to right. Screened interval of the pumping well is located in the center of the domain at a depth of 20 m.

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 (LUFTs), 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.

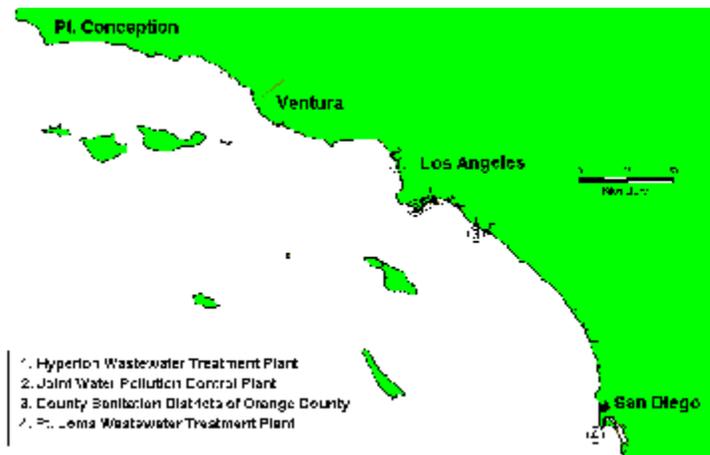
EPA is developing a regulation on ground water that specifies the appropriate use of disinfection and addresses other components of ground water systems to ensure public health protection. Various studies seem to indicate that the number of ground water sources with evidence of fecal contamination is 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"

Waste Water

Characteristics Of Effluents From Large Municipal Wastewater Treatment Facilities

Effluents from the Hyperion Treatment Plant (HTP) of the City of Los Angeles, the Joint Water Pollution Control Plant (JWPCP) of County Sanitation Districts of Los Angeles County (CSDLAC), Wastewater Treatment Plants 1 and 2 of County Sanitation Districts of Orange County (CSDOC), and Point Loma Wastewater Treatment Plant (PLWTP) of the City of San Diego comprise 90% of municipal wastewater discharged directly to the Southern California Bight. These agencies have routinely measured the characteristics of their effluents for at least two decades. Each year during this period, the Southern California Coastal Water Research Project (SCCWRP) has summarized these measurements and reported on discharge and constituent trends. In this report, we summarize the concentrations of effluent constituents and estimate the mass emissions for these four agencies for 1993; we also discuss trends in the mass emissions of contaminants from 1971 to 1993.



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.”

Data & Telecommunications Disruptions

Data and Telecommunications Disruptions was rated a high Risk Priority by the Planning Jurisdictions

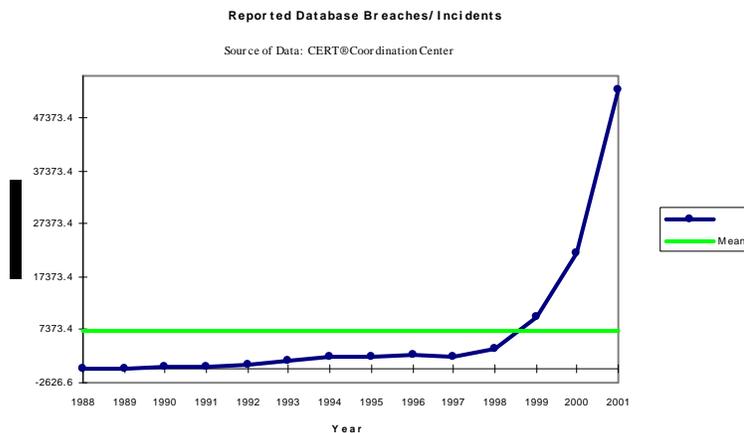
Pico Rivera is the location of a telephone switching station which if affected could cause wide spread telephone and data failure in the area. This switching area will remain unmapped and unidentified as part of the confidentiality risk for terrorism planning. As a small community the Planning Jurisdictions within this Plan are subject to wide range of data and telecommunications risks. Los Angeles County depends upon information systems and communications networks to carry out nearly all aspects of day to day business. In this digital era, as we use automated information technology (IT) systems to process information for better support of our missions, risk management plays a critical role in protecting an our information assets, and therefore our missions, from IT-related risk.

An effective risk management process is an important component of a successful IT security program. The principal goal of an organization's risk management process should be to protect the *organization and its ability to perform their mission*, not just its IT assets. Therefore, the risk management process should not be treated primarily as a technical function carried out by the IT experts who operate and manage the IT system, but as an essential management function of the organization.

Computer Security Breaches

Computer breach incidents have risen sharply since the 1980s. These include viruses, worms, Trojan horses, break-ins, and other damaging breaches. Whereas only six incidents were reported in 1988, the number rose gradually during the late 1980s and 1990s, they made a sharp rise beginning in 1998, and have risen exponentially since. To date, there have been over 142, 500 computer breaches.

The 2002 Computer Security Institute (CSI) Computer Crime and Security Survey revealed that each year, over half of all databases have some kind of breach and that the average breach amounts to nearly \$4 million in losses. This percentage is staggeringly high given that these are the security problems that companies are reporting. Organizations don't want to advertise the fact that their internal people have access to customer data, can steal that data, cover their tracks, give the data to anybody and stay undetected and employed while a crime is committed.



California recently enacted a law mandating the public disclosure of computer security breaches involving confidential information. The law covers not just state agencies but all private enterprises doing business in California. Starting July 1, 2003, any entity that fails to disclose that a breach has occurred could be liable for civil damages or face class action suits.

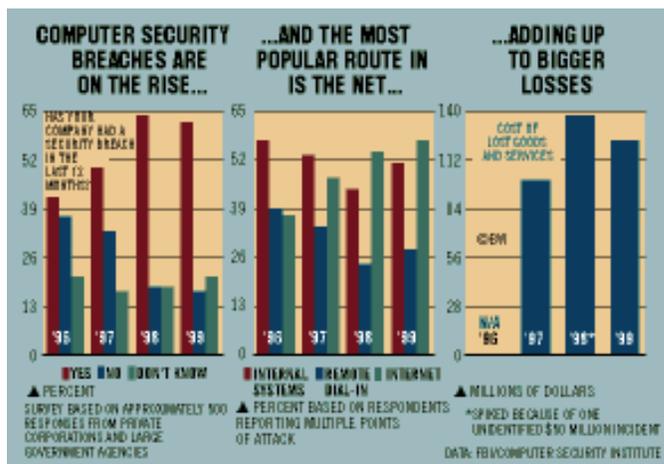
Cyber Crime

"...Cyber crime is becoming one of the Net's growth businesses. The recent spate of attacks that gummed up Web sites for hours--known as "denial of service"--is only one type. Today, criminals are doing everything from stealing intellectual property and committing fraud to unleashing viruses and committing acts of cyber terrorism in which political groups or unfriendly governments nab crucial information. Indeed, the tactic used to create mayhem in the past few days is actually one of the more innocuous ones. Cyber thieves have at their fingertips a dozen dangerous tools, from "scans" that ferret out weaknesses in Web site software programs to "sniffers" that snatch passwords. All told, the FBI estimates computer losses at up to \$10 billion a year.

As grim as the security picture may appear today, it could actually get worse as broadband connections catch on. Then the Web will go from being the occasional dial-up service to being "always on," much as the phone is. That concept may be nirvana to e-tailers, but could pose a real danger to consumers if cyber crooks can come and go into their computer systems at will. Says Bruce Schneier, chief technical officer at Counterpane Internet Security Inc. in San Jose, Calif.: "They'll keep knocking on doors until they find computers that aren't protected."

Sadly, the biggest threat is from within. Law enforcement officials estimate that up to 60% of break-ins are from employees. Take the experience of William C. Boni, a digital detective for PricewaterhouseCoopers in Los Angeles. Last year, he was called in by an entertainment company that was suspicious about an employee. The employee, it turns out, was under some financial pressure and had installed a program called Back Orifice on three of the company's servers. The program, which is widely available on the Internet, allowed him to take over those machines, gaining passwords and all the company's financial data. The employee was terminated before any damage could be done.

The dirty little secret is that computer networks offer ready points of access for disgruntled employees, spies, thieves, sociopaths, and bored teens. Once they're in a corporate network, they can lift intellectual property, destroy data, sabotage operations, or even subvert a particular deal or career. "Any business on the Internet is a target as far as I'm concerned," says Paul Field, a reformed hacker who is now a security consultant.



It's point and click, then stick 'em up. Interested in a little mayhem? Security experts estimate that there are 1,900 Web sites that offer the digital tools--for free--that will let people snoop, crash computers, hijack control of a machine, or retrieve a copy of every keystroke. Steve O'Brien, vice-president for information operation assessments at Info-Ops.com, an Annapolis (Md.)-based company that provides intrusion detection services

and security solutions, says the number of ways to hack into computers is rising fast. He tracks potential threats both from hacker groups and from the proliferation of programs. Once a rare find, he now discovers at least three new nasty software programs or vulnerabilities every day. And those tools aren't just for the intellectually curious. "Anyone can get them off the Internet--just point and click away," says Robert N. Weaver, a Secret Service agent in charge of the New York Area Electronic Crimes Task Force.

Experts say the first step for companies is to secure their systems by searching for hacker programs that might be used in such attacks. They also suggest formal security policies that can be distributed to employees letting them know how often to change passwords or what to do in case of an attack. An added help: Constantly updating software with the latest versions and security patches. Down the road, techniques that can filter and trace malicious software sent over the Web may make it harder to knock businesses off the Net. Says Novell Inc. CEO Eric Schmidt: "Security is a race between the lock makers and the lock pickers." Regulators say that cybercrime thrives because people accord the Internet far more credibility than it deserves. "You can get a lot of good information from the Internet--95% of what you do there is bona fide," says G. Philip Rutledge, deputy chief counsel of the Pennsylvania Securities Commission. "Unfortunately, that creates openings for fraud..."

Excerpts from "Business Week Online, Ira Sager in New York, with Steve Hamm and Neil Gross in New York, John Carey in Washington, D.C., and Robert D. Hof in San Mateo, Calif.

Top Ten Computer Security Breaches

Systems affected: All system and network devices

BIND weaknesses: The Berkeley Internet Name Domain (BIND) package is the most widely used implementation of Domain Name Service (DNS) by which we locate systems on the Internet by name, without having to know specific IP addresses. In a typical example of a BIND attack, intruders erase system logs, and install tools to gain administrative access. They then compile and install IRC utilities and network scanning tools, which are used to scan more than a dozen class-B networks in search of additional systems running vulnerable versions of BIND. In a matter of minutes, they can use the compromised system to attack hundreds of remote systems.

Systems affected: Multiple UNIX and Linux systems

Vulnerable CGI (Common Gateway Interface) programs and application extensions (e.g., Cold Fusion) installed on Web servers: Most Web servers support CGI for data collection and verification. Intruders are known to have exploited vulnerable CGI programs to vandalize Web pages, steal credit card information, and set up back doors to enable future intrusions, even if the CGI programs are secured. As a general rule, sample programs should always be removed from production systems.

Systems affected: All Web servers

Remote procedure call (RPC) weaknesses: Remote procedure calls (RPC) allow programs on one computer to execute programs on a second computer. They are widely used to access network services such as shared files in NFS. There is compelling evidence that the vast majority of distributed denial of service attacks launched during 1999 and early 2000 were executed by systems that had been victimized because they had RPC vulnerabilities. The broadly successful attack on US military systems during the Solar Sunrise incident also exploited an RPC flaw found on hundreds of Department of Defense systems.

Systems affected: Multiple UNIX and Linux systems

RDS security hole in Microsoft Internet Information Server (IIS): Programming flaws in Microsoft's Internet Information Server (IIS) used to host websites deployed on Microsoft Windows NT and Windows 2000 are employed by malicious users to run remote commands with administrator privileges. Some participants who

developed the “Top Ten” list believe that exploits of other IIS flaws, such as .HTR files, are at least as common as exploits of RDS.

Systems affected: Microsoft Windows NT systems using Internet Information Server

Sendmail: Sendmail is the program that handles most e-mail on the Internet. It’s widespread use makes it a prime target. In one of the most common exploits, the attacker sends a crafted mail message to the machine running Sendmail, and Sendmail reads the message as instructions requiring the victim machine to send its password file to the attacker’s machine (or to another victim) where the passwords can be cracked.

Systems affected: Multiple UNIX and Linux systems

Sadmind and mountd: Sadmin allows remote administration access to Solaris systems, providing graphical access to system administration functions. Mountd controls and arbitrates access to NFS mounts on UNIX hosts. Buffer overflows in these applications can be exploited, allowing attackers to gain control with root access.

Systems affected: Multiple UNIX and Linux systems; Sadmin: Solaris machines only

Global file sharing and inappropriate information sharing via NetBIOS and Windows NT ports: These services allow file sharing over networks. When improperly configured, they can expose critical system files or give full file system access to hostile parties.

Systems affected: UNIX, Windows and Macintosh systems.

User IDs, especially root/administrator with no passwords or weak passwords: Some systems come with “demo” or “guest” accounts with no passwords or with widely-known default passwords. Service workers often leave maintenance accounts with no passwords, while some database management systems install administration accounts with default passwords. In addition, busy system administrators often select system passwords that are easily guessable (“love,” “money,” “wizard” are common) or just use a blank password. Many attackers try default passwords and then try to guess passwords before resorting to more sophisticated methods.

Systems affected: All systems.

IMAP and POP buffer overflow vulnerabilities or incorrect configuration: IMAP and POP are popular remote access mail protocols, allowing users to access their e-mail accounts. The “open access” nature of these services makes them especially vulnerable to exploitation because openings are frequently left in firewalls to allow for external e-mail access. Attackers who exploit flaws in IMAP or POP often gain instant root-level control.

Systems affected: Multiple UNIX and Linux systems

Default SNMP community strings set to ‘public’ and ‘private’: The Simple Network Management Protocol (SNMP) is widely used by network administrators to monitor and administer all types of network-connected devices, ranging from routers to printers to computers. SNMP uses an unencrypted “community string” as its only authentication mechanism. Lack of encryption is bad enough, but the default community string used by the vast majority of SNMP devices is “public”, with a few clever network equipment vendors changing the string to “private”. Attackers can use this vulnerability in SNMP to reconfigure or shut down devices remotely.

Information Technology Security Practices

Computer Security Policy

The term *computer security policy* has more than one meaning. Policy is senior management's directives to create a computer security program, establish its goals, and assign responsibilities. The term policy is also used to refer to the specific security rules for particular systems. Additionally, policy may refer to entirely different matters, such as the specific managerial decisions setting an organization's e-mail privacy policy or fax security policy.

Program Management

Managing computer security at multiple levels brings many benefits. Each level contributes to the overall computer security program with different types of expertise, authority, and resources. In general, executive managers (such as those at the headquarters level) better understand the organization as a whole and have more authority. On the other hand, front-line managers (at the computer facility and applications levels) are more familiar with the specific requirements, both technical and procedural, and problems of the systems and the users. The levels of computer security program management should be complementary; each can help the other be more effective. Many organizations have at least two levels of computer security management; the *central* level and the *system* level.

Risk Management

Risk is the possibility of something adverse happening. Risk management is the process of assessing risk, taking steps to reduce risk to an acceptable level and maintaining that level of risk. Risk management requires the analysis of risk, relative to potential benefits, consideration of alternatives, and, finally, implementation of what management determines to be the best course of action. Risk management consists of two primary and one underlying activity; risk assessment and risk mitigation are the primary activities and uncertainty analysis is the underlying one. An organization should consider the following when assessing risks. Life Cycle Planning

Security, like other aspects of an IT system, is best managed if planned for *throughout* the IT system life cycle. There are many models for the IT system life cycle but most contain five basic phases: initiation, development/acquisition, implementation, operation, and disposal.

Personnel/User Issues

Many important issues in computer security involve users, designers, implementers, and managers. A broad range of security issues relate to how these individuals interact with computers and the access and authorities they need to do their job. No IT system can be secured without properly addressing these security issues.

Preparing for Contingencies and Disasters

Contingency planning directly supports an organization's goal of continued operations. Organizations should practice contingency planning because it makes good business sense. Contingency planning addresses how to keep an organization's critical functions operating in the event of disruptions, both large and small. This broad perspective on contingency planning is based on the distribution of computer support throughout an organization..

Computer Security Incident Handling

A computer security incident can result from a computer virus, other malicious code, or a system intruder, either an insider or an outsider. The definition of a computer security incident is somewhat flexible and may vary by organization and computing environment. An incident handling capability may be viewed as a component of

contingency planning, because it provides the ability to react quickly and efficiently to disruptions in normal processing. Incident handling can be considered that portion of contingency planning that responds to malicious technical threats.

Awareness and Training

An effective computer security awareness and training program requires proper planning, implementation, maintenance, and periodic evaluation.

Security Considerations in Computer Support and Operations

Computer support and operations refers to system administration and tasks external to the system that support its operation (e.g., maintaining documentation). Failure to consider security as part of the support and operations of IT systems is, for many organizations, a significant weakness. Computer security system literature includes many examples of how organizations undermined their often expensive security measures because of poor documentation, no control of maintenance accounts, or other shoddy practices.

Physical and Environmental Security

Physical and environmental security controls are implemented to protect the facility housing system resources, the system resources themselves, and the facilities used to support their operation. An organization's physical and environmental security program should address the following seven topics. In doing so, it can help prevent interruptions in computer services, physical damage, unauthorized disclosure of information, loss of control over system integrity, and theft.

Identification and Authentication

Identification and Authentication is a critical building block of computer security since it is the basis for most types of access control and for establishing user accountability. Identification and Authentication is a technical measure that prevents unauthorized people (or unauthorized processes) from entering an IT system. Access control usually requires that the system be able to identify and differentiate among users. For example, access control is often based on *least privilege*, which refers to the granting to users of only those accesses minimally required to perform their duties. User accountability requires the linking of activities on an IT system to specific individuals and, therefore, requires the system to identify users.

Logical Access Control

Access is the ability to do something with a computer resource (e.g., use, change, or view). Logical access controls are the system-based means by which the ability is explicitly enabled or restricted in some way. Logical access controls can prescribe not only who or what (e.g., in the case of a process) is to have access to a specific system resource but also the type of access that is permitted.

Audit Trails

Audit trails maintain a record of system activity by system or application processes and by user activity. In conjunction with appropriate tools and procedures, audit trails can provide a means to help accomplish *several* security-related objectives, including individual accountability, reconstruction of events, intrusion detection, and problem identification.

Cryptography

Cryptography is a branch of mathematics based on the transformation of data. It provides an important tool for protecting information and is used in many aspects of computer security. Cryptography is traditionally associated only with keeping data secret. However, modern cryptography can be used to provide many security services, such as electronic signatures and ensuring that data has not been modified. Several important issues should be considered when designing, implementing, and integrating cryptography in an IT system.

Transportation Accidents/Incidents

Transportation Accidents are rated as a High Priority Risk by the Planning Jurisdictions.

Rail Incidents

Train derailments are so localized that the incidents themselves would not constitute a federal disaster declaration, if there are volatile or flammable substances on the train and the train is in a highly populated or densely forested area, death, injuries, damage to homes, or wild fires could occur.

On October 16, 2004 nearly 50 railroad cars-including some carrying hazardous materials derailed in an accident that damaged at least four homes and forced the evacuation of 24 others. The incident was reported to have affected Pico Rivera, West Whittier and L.A. County.

This is the 2nd major accident in Southern L.A County in the past two years, the other being a runaway train that was derailed in Commerce, California.

There have been 16 MAJOR train accidents in California since 1950.

Incident	Location
Metrolink collision	Glendale
Southern Pacific collision	Beaumont
Union Pacific derailment	Kelso
Freight train derailment	Cajon
Atchison, Topeka, & Santa Fe/Union Pacific collision	Cajon
Atchison, Topeka, & Santa Fe/ATSF collision	Corona
Amtrak passenger train collision	Stockton
Southern Pacific derailment	San Bernardino
Southern Pacific derailment	West Surf
Union Pacific collision	Kelso
Western Pacific derailment	Hayward
Southern Pacific collision	Thousand Palms
Southern Pacific collision	Tracy
Two Southern Pacific trains collision	Indio
City of Commerce Runaway Train	Commerce
50 Car Train derailment	Whittier/Pico Rivera

In Los Angeles County, there were a total of 148 train accidents from January 2000 to June 2004. The following statistics append this figure:

- Deaths – 0
- Injuries – 13
- Loss - \$7,978,342

TYPE OF ACCIDENT

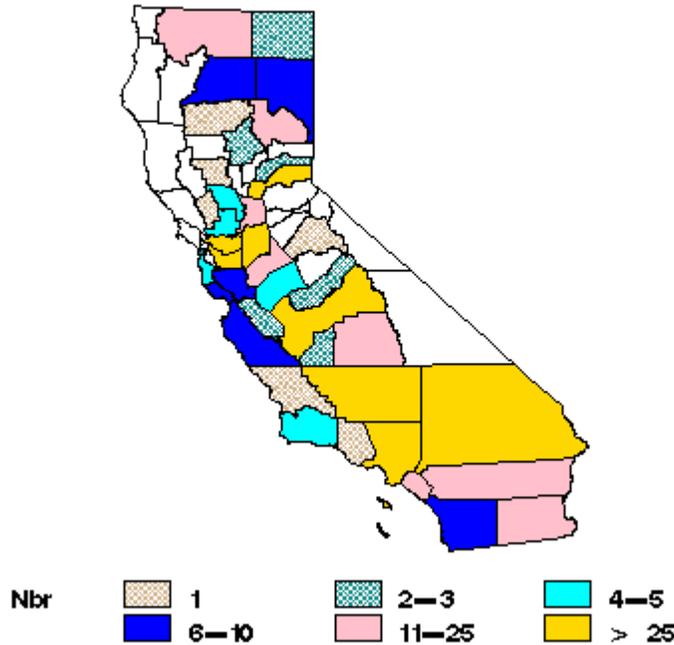
- Collisions – 9
- Derailments – 112
- Other – 27

CAUSE OF ACCIDENT

- Equipment – 1
- Human Error – 84
- Other – 13
- Signal Malfunction – 1
- Track Faulty – 49

TRAIN ACCIDENTS FOR CALIFORNIA, January 2000 TO June 2004

RAILROAD: ALL TYPE OF TRACK: All



Excludes Highway Rail Incidents

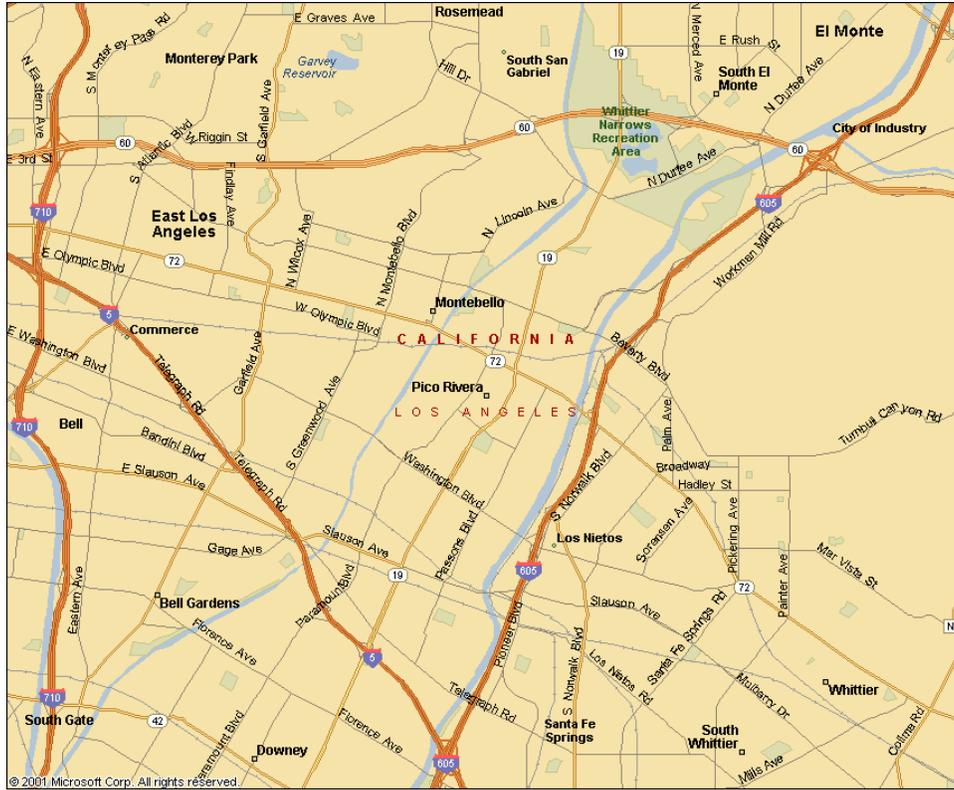
Highway Transportation

Because of the tremendous volume of transportation (commercial and private) into and out of LA County on the freeways that surround the Planning jurisdictions, 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.

Pico Rivera Streets could become alternate detour routes for freeway accidents, causing extreme traffic congestion and impede emergency response within the Planning Jurisdictions.

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.

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
 VERSION 1.1 (NOVEMBER 2004)



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
McDonnell 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, about 1811 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

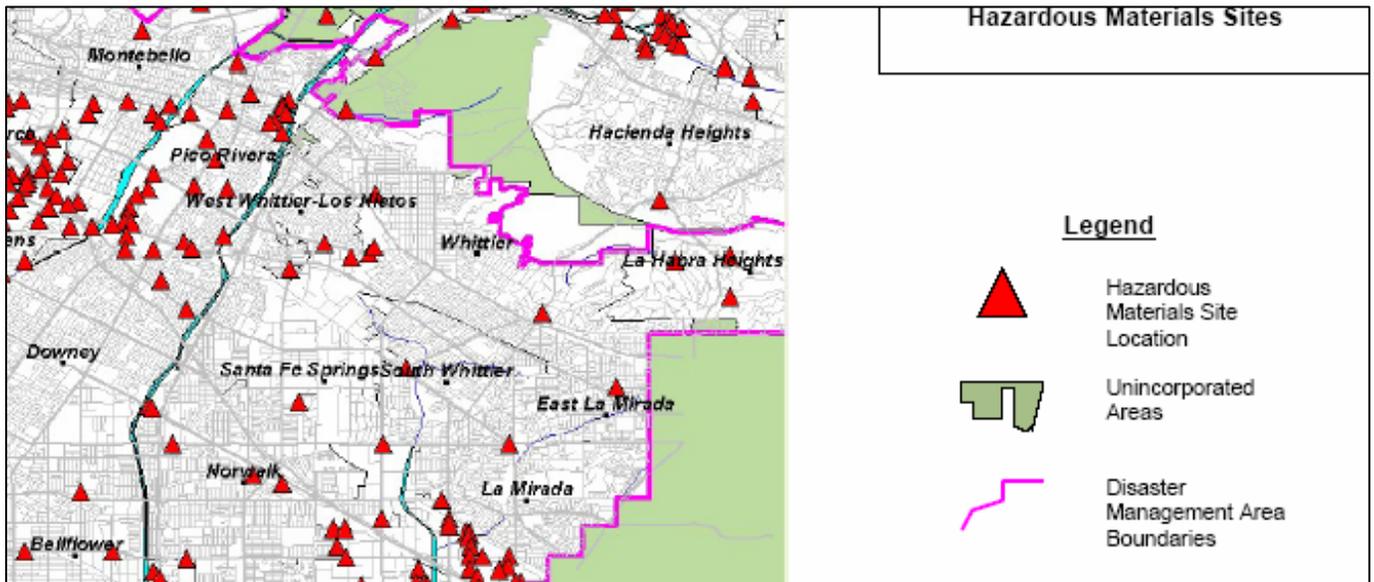
exterior damage and some internal damage to the passenger cabin. During the accident sequence, the forward service door (1R) escape slide inflated inside the airplane; the nose gear collapsed; and the forward dual flight attendant jump seat, which was occupied by two flight attendants, partially collapsed.

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.

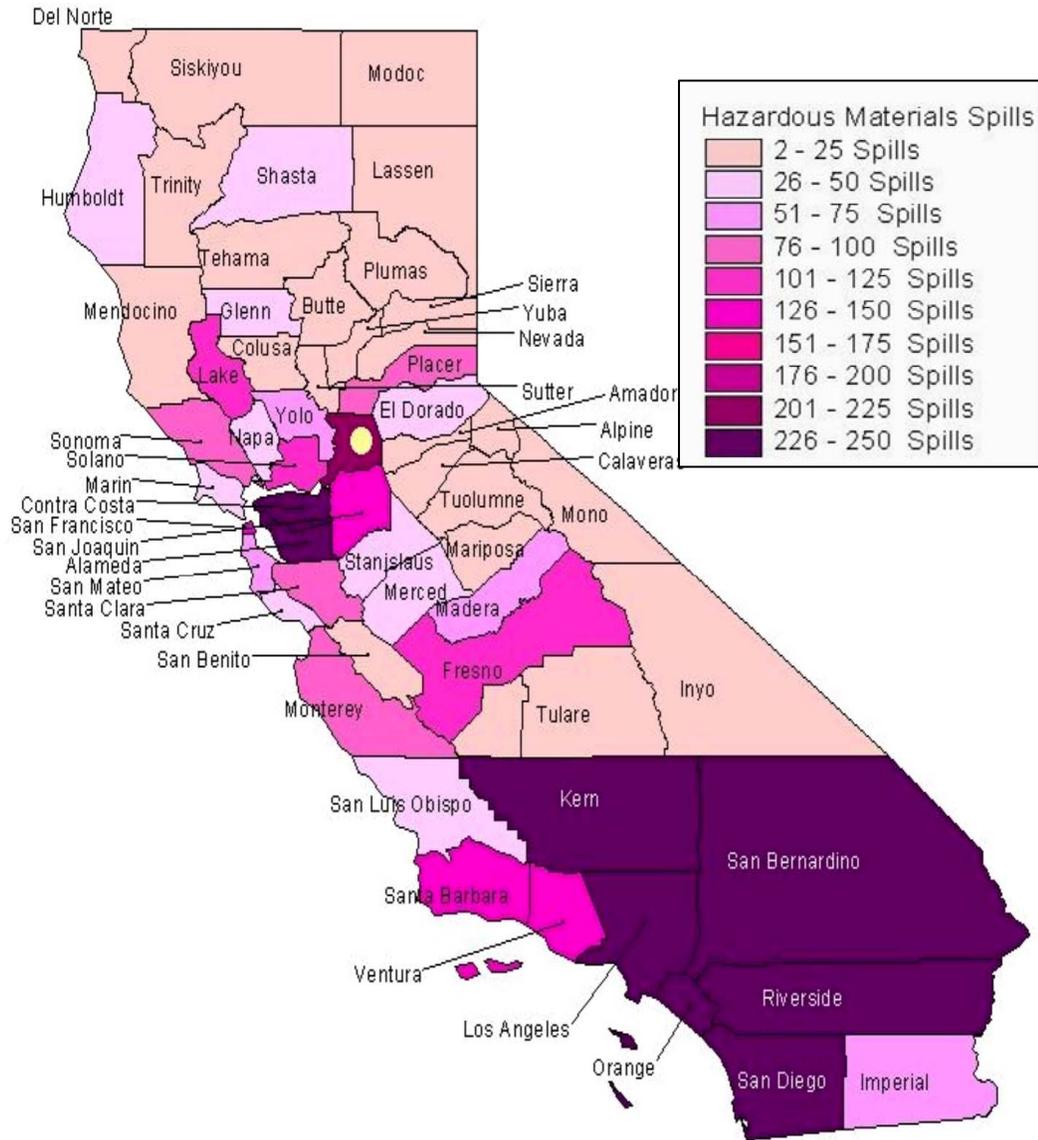
Hazardous Materials

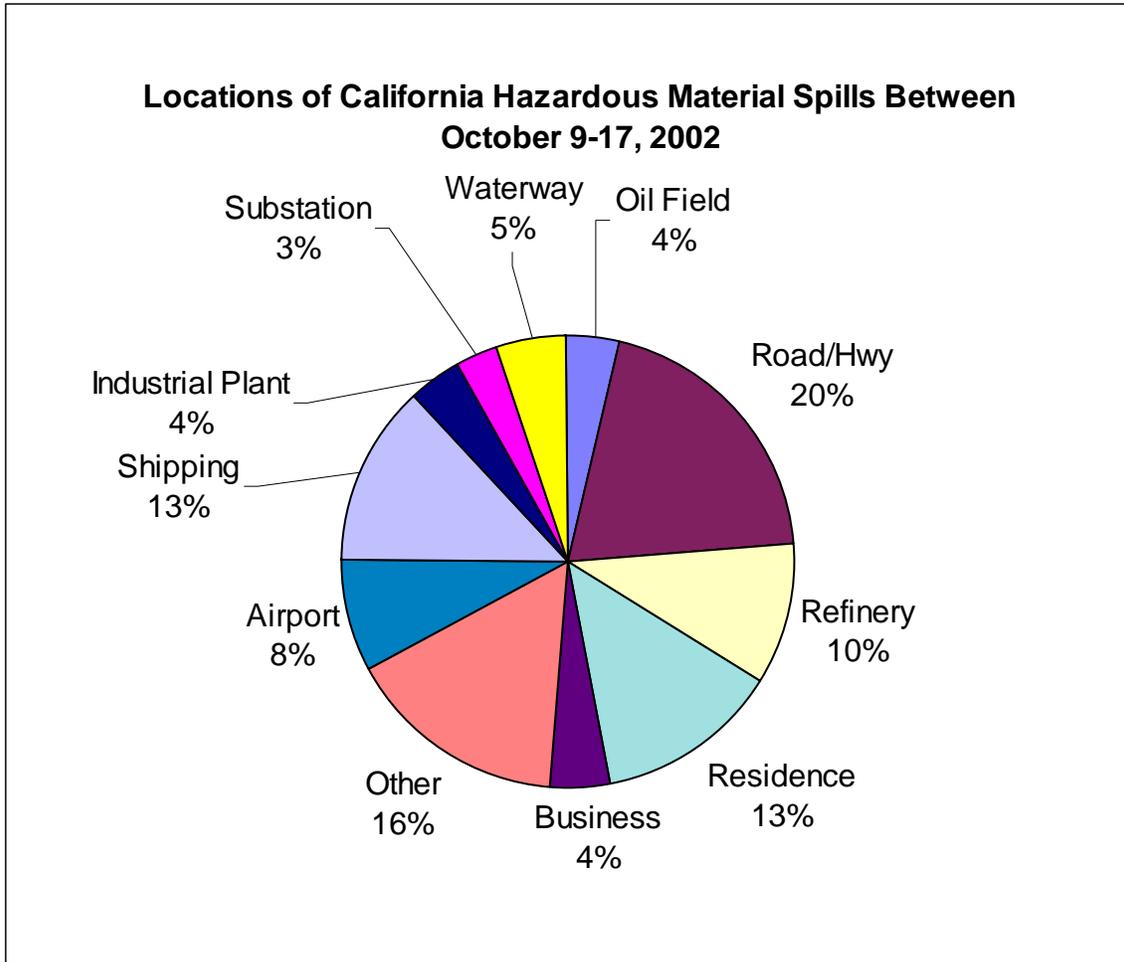
Hazardous Materials is rated a High Priority Risk in connection with Earthquake and Transportation Accidents.

Hazardous materials are everywhere and are accidentally released or spilled many times during any given day. The attached chart lists the most common sites for spills in California based on an analysis of 173 reports for spills occurring between October 9 and October 17, 2002.



CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
 VERSION 1.1 (NOVEMBER 2004)





Regulatory Programs

Hazard analysis and risk assessments are performed by businesses at individual facilities. They are also conducted by specific industries or organizations for processes common to all operators in that industry. Transporters of hazardous materials also conduct these activities, whether the materials are moved by road, rail, water, air, or pipeline.

There are a number of legally mandated programs requiring businesses to conduct hazard analysis and risk assessment. Some of the existing requirements include:

California Accidental Release Prevention Program (Ca1ARP) required pursuant to H&SC 25531, et seq. implements the federal Accidental Release Prevention program with additional California-specific requirements. This program requires any business with more than a threshold quantity of a regulated substance in a process, unless exempted, to implement an accidental release prevention program. There are three levels for the program with businesses subject to levels two and three required to conduct a hazard assessment. Businesses may be required to prepare and implement a Risk Management Plan (RMP). A map of facilities that have prepared a Risk Management Plan or Ca1ARP Document follows this section of the Emergency Plan. This map was developed through the Environmental Protection Agency (EPA) for facilities that submitted RMP documents to EPA by June 21, 1999. A map is provided in attachment 10, along with a list of Certified Unified Program Agency (CUPA) & Participating Agencies (PA's) in LEPC Region 1.

Air Toxics "Hot Spots" Information and Assessment Act required pursuant to H&SC 44300, et seq. requires emitters of hazardous air contaminants to conduct health risk assessments to evaluate those emissions. This program is designed to identify, assess, and control ambient levels of hazardous air pollutants. It seeks to collect and evaluate information concerning the amounts, exposures, and short- and long-term health effects of hazardous substances released into the atmosphere.

California Refinery and Chemical Plant Worker Safety Act required pursuant to California Labor Code § 7850 et. seq. Evaluates chemical process safety when dealing with the risks associated with handling or working near hazardous chemicals. It is intended to prevent or minimize the consequences of catastrophic releases of acutely hazardous, flammable, or explosive chemicals. The law requires the employer to conduct a hazard analysis for identifying, evaluating, and controlling hazards involved in a process. While focused on employee protection, a successful program will have the effect of also protecting the surrounding community.

Worker Health and Safety Regulations [federal (29 CFR 1910.120) and state (8 CCR 5192)] require employers to identify, evaluate, and control hazards employees may encounter during hazardous waste operations and emergency response.

Hazardous Materials Transportation

Federal emergency planning requirements include the formation of local emergency planning committees (LEPCs). The LEPC is required to evaluate facilities using threshold quantities of extremely hazardous substances (EHS), and determine which facilities are at risk of a release or subject to additional risk due to their proximity to another facility using EHS. The LEPC is also required to identify hazardous materials transportation routes. This requirement has led Region I LEPC to develop a specific transportation element to its plan. The following represents the Region I transportation element:

Transportation of hazardous materials by air, land, or water poses a significant need to plan and coordinate emergency resources necessary to respond to hazardous materials spills and releases. These types of incidents could affect several million Californians and are potentially hazardous to both the local community, and those traveling near the incident site. First, we will discuss the different modes of transportation and the unique challenges presented for planners and emergency responders.

Air

The southern California region has several major air transportation facilities. In some instances, there may be hazardous materials incidents involving air cargo either on the aircraft or on the ground. Initial response to these incidents would be provided by airport emergency response personnel. The need may arise for additional resources to respond. Response efforts must be coordinated to ensure all personnel are made aware of the material involved and of the potential hazards. In the event of a crash of an aircraft, the major hazardous materials concerns will be fuel from the aircraft, hydraulic fluid, and oxygen systems. The threat posed by onboard hazardous cargo will be minimal. Regulations on hazardous materials shipments by air are found in 49 CFR Section 175.

Water

Two major ports serve the southern California region. These are the Port of Los Angeles and the Port of Long Beach. The prime concern for these two major ports would be releases of petroleum products from both oil tankers and other large ocean going vessels. Not only is there a significant potential from fire and explosion, the environmental effects could be catastrophic. Additionally many other types of hazardous materials may be shipped by bulk or containerized cargo. Planners must recognize potential risks associated with vessels and port facilities in their hazard assessment. Response to water related incidents is coordinated through the Coast Guard and the California Department of Fish and Game. Regulations governing transportation of hazardous materials by vessel are found in 49 CFR Section 176.

Ground

Ground transportation provides the largest movement of hazardous materials and will generate the majority of incidents which will be confronted by local emergency response personnel. The three modes of ground transportation are rail, highway, and pipeline.

Rail is unique in both the quantity and types of hazardous materials which can be involved in one incident. Collisions, derailments, and mechanical failure, as well as loading and unloading, can all result in very serious hazardous materials incidents. A critical consideration for planners is a careful evaluation of the rail traffic in their jurisdiction. Rail companies as well as product manufacturers have emergency response teams available to assist local emergency responders. The United States Department of Transportation governs the transportation of hazardous materials by rail. The regulations are found in 49 CFR Section 174. Additional oversight is provided in California by the Public Utilities Commission.

Highway-related hazardous materials incidents account for the vast majority of situations faced by local responders. Highway incidents range from minor releases of diesel fuel, to multiple vehicle accidents involving large quantities of multiple types of hazardous materials. A concern for planners is the fact that these incidents can occur anywhere throughout the region. Multiple agency coordination is essential for successful control and mitigation of these incidents. Section 2454 of the California Vehicle Code mandates authority for incident command at the scene of an on-highway hazardous substance incident in the appropriate law enforcement agency having primary traffic investigative authority on the highway where the incident occurs. The local governing body of the city may assign the authority to the local fire protection agency.

Pipeline incidents will typically involve compressed natural gas, or petroleum products. An important aspect for planners to consider is that pipelines are frequently out of sight and out of mind. Southern California region is honeycombed with underground pipelines ranging from a few inches to several feet in diameter. Pipelines transport products from as far away as Texas for use by local consumers. An important source of information on underground pipelines is Dig Alert. Regulation of pipeline activity is governed by the U.S. Department of Transportation and the California Public Utilities Commission.

Potential Effects of a Hazardous Materials Incident

As previously mentioned, highway accidents and incidents will constitute the majority of emergency response situations. There are two distinct facets which must be addressed in a local emergency action plan. Planners must consider the local community with fixed facilities and those individuals in transit. The following is illustrative of typical concerns which planners will encounter in addressing hazardous material occurrences.

Residential and Business Community

Chemical spills on streets and highways can impact the public in one or more of the following ways:

- Shelter-in-place
- Evacuations
- Restriction or detour of local traffic
- Damage to homes and businesses
- Injury, illness or death

Because of these potentially dangerous situations, it is necessary for emergency responders to be familiar with requirements for hazmat spill notification and to obtain and direct the resources necessary to protect public health and the environment. The following requirements address immediate spill notification:

California Health and Safety Code Section 25507.2. California Vehicle Code 24533. California Government Code 8574.17 4. 42 U.S.C. 9602

In addition, provisions for response recovery are provided if the National Response Center is contacted (refer 40 CFR Part 310). All agencies within LEPC Region I are encouraged to report all spills and releases to the Office of Emergency Services and National Response Center when there is any significant or potential threat to the public. Additionally, public information through the news media to the public is a priority of California OES and Region I Local Emergency Planning Committee.

Commuter/Delivery Traffic

In addition to the surrounding locale, travelers going through or near transportation incidents may be impacted in several ways:

- Exposure to harmful or flammable chemicals resulting in injury or illness
- Delayed travel
- Accidents
- Vehicle damage due to chemical contact

Agencies with on highway responsibility in LEPC Region I should become familiar with shipping corridors and traffic patterns. Hazardous material transporters are also required to report incidents involving hazardous materials or wastes pursuant to the following regulations:

- Title 13 California Code of Regulations, Section 11662. Title 49 Code of Federal Regulations, Part 17

Region I Transportation Needs

Research has indicated that the majority of hazardous materials incidents occur in the transportation arena. This fact strongly suggests that the region make the following recommendations for further transportation planning assessment:

- Identify various surface transporters within the region
- Determine level of training as it relates to transportation routes and notification requirements
- Evaluate emergency response resources for both public and private hazardous materials response teams
- Prioritize response resources in areas unable to respond to proportionally higher number of incidents.
- Develop standard guidelines for evacuation of populations impacted by transportation related incidents.
- Evaluate the need to perform Transportation Risk Assessment for selected high priority areas.

Emergency planning principles and practices indicate that emergency plans include all the hazards existing within a jurisdiction. California OES has developed the Emergency Planning Guidance for Local Government to

assist local government in conducting emergency planning. Information on hazard analysis is also included in this guidance document.

Whittier Narrows Superfund Site

RECORD OF DECISION

DECISION SUMMARY

1.0 SITE LOCATION AND DESCRIPTION

The San Gabriel Valley Areas 1-4 sites are located approximately 10-20 miles east of Los Angeles in Los Angeles County in southern California (Figure 1). The sites are four large areas of groundwater contamination that underlie significant portions of the cities of Azusa, Baldwin Park, La Puente, City of Industry, West Covina, El Monte, South El Monte, Monrovia, Arcadia, Rosemead, Alhambra, and other municipalities or unincorporated areas of the San Gabriel Valley. The general areas of contamination associated with the four San Gabriel Sites are shown in Figure 2. The sites include industrial, commercial, residential, as well as undeveloped areas.

The San Gabriel Valley is an alluvial basin bounded by the San Gabriel Mountains, which rise up to 10,000 feet in the north, and to the east, southeast, southwest, and west by a series of low-level (under 1000 feet) sedimentary hills--the San Jose, Puente, Merced, and Repetto Hills. The major surface water drainage in the San Gabriel Valley is the San Gabriel and Rio Hondo Rivers which flow from the northeast to the southeast where they flow from the valley through the Whittier Narrows, a two-mile gap between the Merced and Puente Hills. There is typically no flow in the rivers during the summer dry season except near the Whittier Narrows area, where the flow is primarily a combination of sewage treatment plant effluent and groundwater discharge. The valley is a broad plain that slopes at an average of 65 feet per mile from the foot of the San Gabriel Mountains toward Whittier Narrows.

The Main San Gabriel Groundwater Basin, which underlies the San Gabriel Valley, consists primarily of highly permeable gravel and cobble deposits. Numerous interbedded lenses of clays also occur, particularly in the southern portion of the basin and near the surrounding hills. Regional groundwater flow velocities range as high as 1000 feet per year. Groundwater flows generally in the same pattern as the surface water drainage with subsurface drainage flowing out of the San Gabriel Basin through the Whittier Narrows area into Central Basin to the south. In some areas of the valley, however, such as in the west valley near San Gabriel, large-scale groundwater pumping has resulted in a reversal of the historical groundwater flow direction. Groundwater also discharges to surface water along San Jose Creek in the southeast portion of the valley and in the San Gabriel and

-8-

Valley Superfund Project Technical Advisory Committee, the Central and West Basin Replenishment District, and Suburban Water Systems. Intergovernmental review was initiated in a letter of July 22nd through the Governor's Office of Planning and Research/State Clearinghouse.

The OUFs evaluated two different locations for siting of a new water treatment facility. To solicit comment from the community on locating the treatment facility remote from the Bartolo Well Field at the Bartolo Transmission Main High Point alternative site, EPA delivered notices door-to-door in the vicinity of the High Point site. The notices included the proposed plan fact sheet, a map of the Bartolo Well Field/north Whittier area showing the High Point location, and a cover letter encouraging public comment regarding the alternative locations. The delivery was made in two phases. On July 9th, the notices were delivered to about 800 homes in the residential area near the High Point location who were thought to be in visual range of the potential site. On July 13th, notices were delivered to about 2,400 homes located somewhat further from the High Point location.

In addition to EPA's community relations activities, SWS cooperated in notifying their customers of EPA's proposed plan. A notice was mailed on June 22nd to all of their approximately 34,000 customers in the Whittier and La Mirada service districts (who would potentially receive drinking water from the proposed treatment plant). The notice briefly described the OUFs, announced the public comment period and public meeting, and invited SWS's customers to contact SWS to obtain a copy of the proposed plan fact sheet. EPA provided about 800 copies of the fact sheet to SWS that were distributed to customers who called in a request. SWS also sent letters to the City Managers of Whittier and La Mirada notifying them of the proposed plan and the public meeting.

EPA has prepared the attached responsiveness summary, which provides responses to the comments submitted in writing during the public comment period, as well as comments made by attendees at the July 13th public meeting.

5.0 DECISION SCOPE

As discussed in the Site History (page 4), EPA has previously selected a remedy to address the public health threat posed by contamination of the public water supply wells of the three mutual water companies in El Monte. The response action

groundwater flow patterns and limited available data regarding the vertical extent of contamination (see discussion below), it is highly probable that the "clean" areas separating the contamination in the Whittier Narrows area from the major plume areas in the Area 1, 2, and/or 4 sites are actually contaminated.

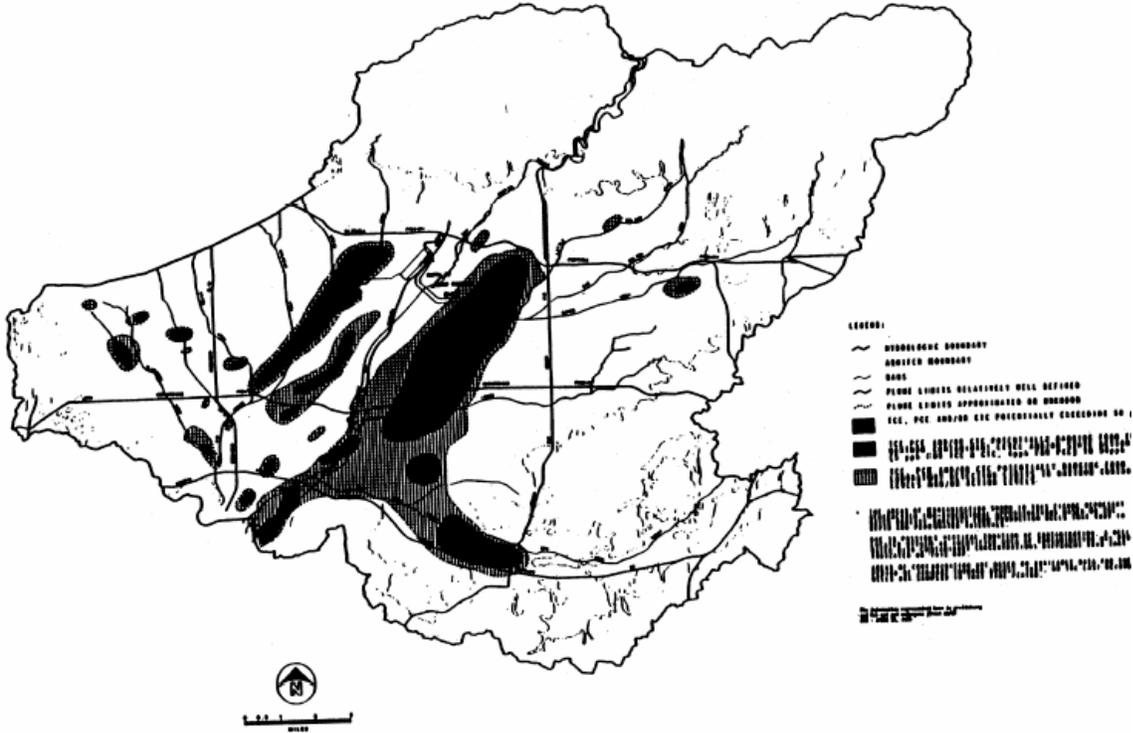


FIGURE 2
EXTENT OF VOLATILE ORGANIC COMPOUND
GROUNDWATER CONTAMINATION
IN THE SAN GABRIEL VALLEY

The Whittier Narrows Superfund site poses and threat to the ground water supply in the City of Pico Rivera, the City and its planning jurisdictions have no influence on the remedial action being taken by the Federal Superfund Officials.

Moderate Risk Priority Hazards

Dam Failure

The Planning Jurisdictions rated this Hazard to be a moderate priority.

The City of Pico Rivera is in direct line for flooding from the Whittier narrows Dam. The Whittier narrows dam is an earth filled dam built by the Army Corps of Engineers in 1957. The dam is rated as a high hazard dam for failure in an earthquake by the FEMA HAZUS program. However the dam seldom has a significant amount of water behind it and is not considered a high hazard threat by the Planning Jurisdictions

Name	Owner	Hazard	# of Residents within 5 km Radius	Dam Height (ft)	Surface Area (acres)	Latitude	Longitude
WHITTIER NARROWS DAM	CESPL	H	2900	56	1	34.020000	-118.053330

Hazus Study Data provided by University of Southern California based on FEMA HAZUS

Whittier Narrows Dam

Whittier Narrows Dam is a flood control and water conservation project constructed and operated by the U.S. Army Corps of Engineers, Los Angeles District. Construction of the project was completed in 1957. The project is located, as its name implies, at the "Whittier Narrows". The Whittier Narrows are a natural gap in the hills that form the southern boundary of the San Gabriel Valley. The Rio Hondo and the San Gabriel River flow through this gap and are impounded by the reservoir. The Pomona (60) freeway passes through the reservoir flood control basin and the San Gabriel (605) freeway passes along the eastern boundary of the basin. Authorization for the project construction is contained in the Flood Control Act of 18 August 1941 (PL 77-228) and the initial funds for construction were provided in the 1949 Appropriations Bill.

Whittier Narrows Dam provides water conservation storage and is also the central element of the Los Angeles County Drainage Area (LACDA) flood control system. The purpose of the project is to collect runoff from the uncontrolled drainage areas upstream along with releases into the San Gabriel River from Santa Fe Dam. If the inflow to the reservoir exceeds the groundwater recharge capacity of the spreading grounds along the Rio Hondo or the bed of the San Gabriel River downstream, this water is stored temporarily in a water conservation pool. The Rio Hondo and San Gabriel sides of the reservoir each have their own water conservation pools. If the water conservation pool on the Rio Hondo side is exceeded, flows are released into the Rio Hondo at a rate which not exceed the downstream channel capacity of either the Rio Hondo, or the Los Angeles River. If the water conservation pool on either side of the reservoir is exceeded a release of approximately 5000 cfs (142 cms) can be made into the San Gabriel River. If the pool in the reservoir exceeds flood control storage, the gates on the San Gabriel River outlet begin to open automatically and emergency releases are made into the San Gabriel River.

The Rio Hondo outlet has four main outlet passages plus a small diversion passage. The San Gabriel outlet has nine large gates installed on top of a spillway. Dimensions are furnished in the table below.

The "stand-by" position of the gates on the Rio Hondo outlet is wide open. On the San Gabriel side one gate is normally open about 0.5 feet (0.15 meters) with the remaining gates closed. The reservoir is normally empty and a "crossover weir" within the reservoir keeps the flows from the Rio Hondo and the San Gabriel River separated. The natural flow to each river therefore normally passes through the dam unhindered.

During the initial stages of a flood event, the gates on the Rio Hondo side are partially closed to build a water conservation pool. As long as the pool on the Rio Hondo side of the reservoir is below elevation 201.6 feet (61.4 meters) NGVD, releases are made to accommodate the capacity of the spreading grounds downstream along the Rio Hondo. The spreading grounds are operated by the Los Angeles County Department of Public Works to recharge the groundwater basin. Flow reaches the spreading grounds either directly by way of the diversion passage or from a diversion structure in the Rio Hondo downstream of the dam. Both the diversion passage direct from the dam and the diversion structure in the Rio Hondo are operated by the county.

When the water conservation pool on the Rio Hondo side of the reservoir is exceeded, the releases to the Rio Hondo are increased to match inflow until either the capacity of the Rio Hondo or the Los Angeles River downstream are reached. If the water conservation pool on either side of the reservoir is exceeded, discharges on the San Gabriel side can be increased to approximately 5000 cfs (142 cms).

The San Gabriel outlet has automatic spillway gates. When the pool in the reservoir exceeds flood control storage these gates will begin to open automatically. The top of the flood control storage pool is at elevation 228.5 feet (69.6 meters) NGVD.

The capacity of the Rio Hondo downstream from Whittier Narrows Dam is approximately 36,500 cfs (1,034 cms). The capacity of the Los Angeles River downstream of its confluence with the Rio Hondo is approximately 127,000 cfs (3,596 cms), and the capacity of the San Gabriel River downstream of the dam is approximately 13,100 cfs(371 cms).

The current water control manual for Whittier Narrows Dam was approved in October 1957.

Physical Data

Embankment

Type	Earth Fill
Crest Elevation	239 feet NGVD 72.8 meters NGVD
Maximum height above streambed	56 feet 17.1 meters
Crest Length	16,960 feet 5169 meters
Freeboard	0.1 feet 0.03 meters

Spillway (San Gabriel Outlet)

Type	Concrete Broad Crest with Automatic Gates
Gate Sill Elevation	200.0 feet NGVD 61.0 meters NGVD
Elevation of Top of Gates with Gates Closed	229 feet NGVD 69.8meters NGVD
Crest Length	538.16 feet 164 meters
Number of Spillway Gates	9
Spillway Gate Type	Automatic Tainter
Spillway Gate Height x Width	29 x 50 feet 8.8 x 15.2 meters

Outletworks (Rio Hondo Outlet)

Number of Passages	4
Gate Type	Tainter
Height x Width (each)	19 x 30 feet 5.8 x 9.1 meters
Entrance Invert Elevation	184 feet NGVD 56.1 meters NGVD
Maximum Capacity	74,700 cfs 2,115 cms

Reservoir

Flood Control Pool

Elevation of top of Pool	228.5 feet NGVD	69.6 meters NGVD
Area at top of Pool	2411 Acres	9,757,000sm
Gross Storage at top of Pool	34,947 Acre-feet	43.1 MCM

Rio Hondo Water Conservation Pool

Elevation of top of Pool	201.6 feet NGVD	61.4 meters NGVD
Area at top of Pool	252.0 Acres	1,020,000 sm
Gross Storage at top of Pool	2,498 Acre-feet	3.08 MCM

San Gabriel Water Conservation Pool

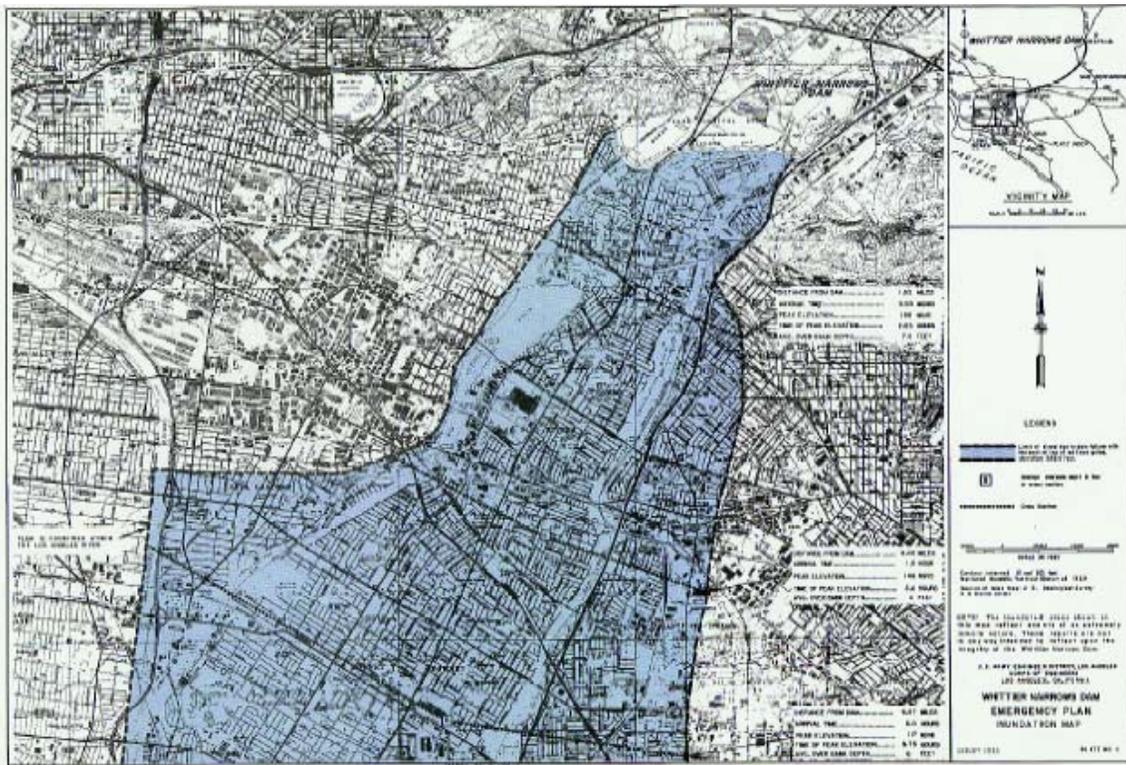
Elevation of top of Pool	213.5 feet NGVD	65.1 meters NGVD
Area at top of Pool	89 Acres	360,000 sm
Gross Storage at top of Pool	532 Acre-feet	0.66 MCM

San Gabriel Historic Maximum Water Surface

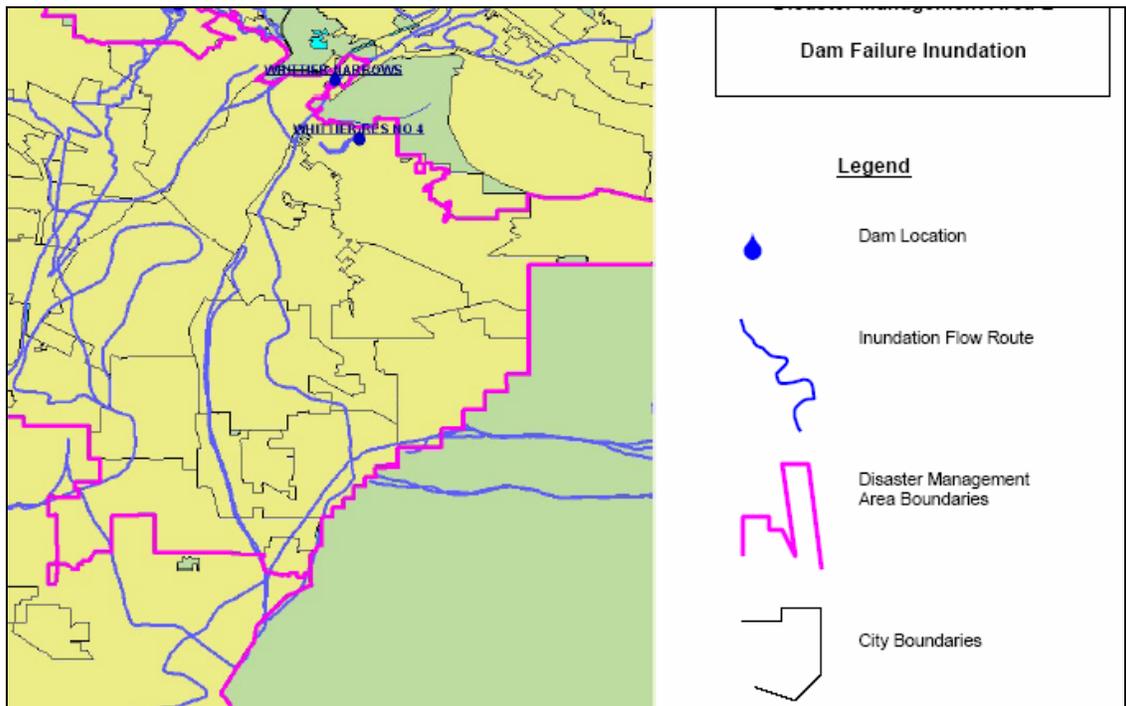
Date	25 January 1969	
Maximum Elevation	216.5 feet NGVD	66.0 meters NGVD

Aerial View of the Whittier Narrows Dam





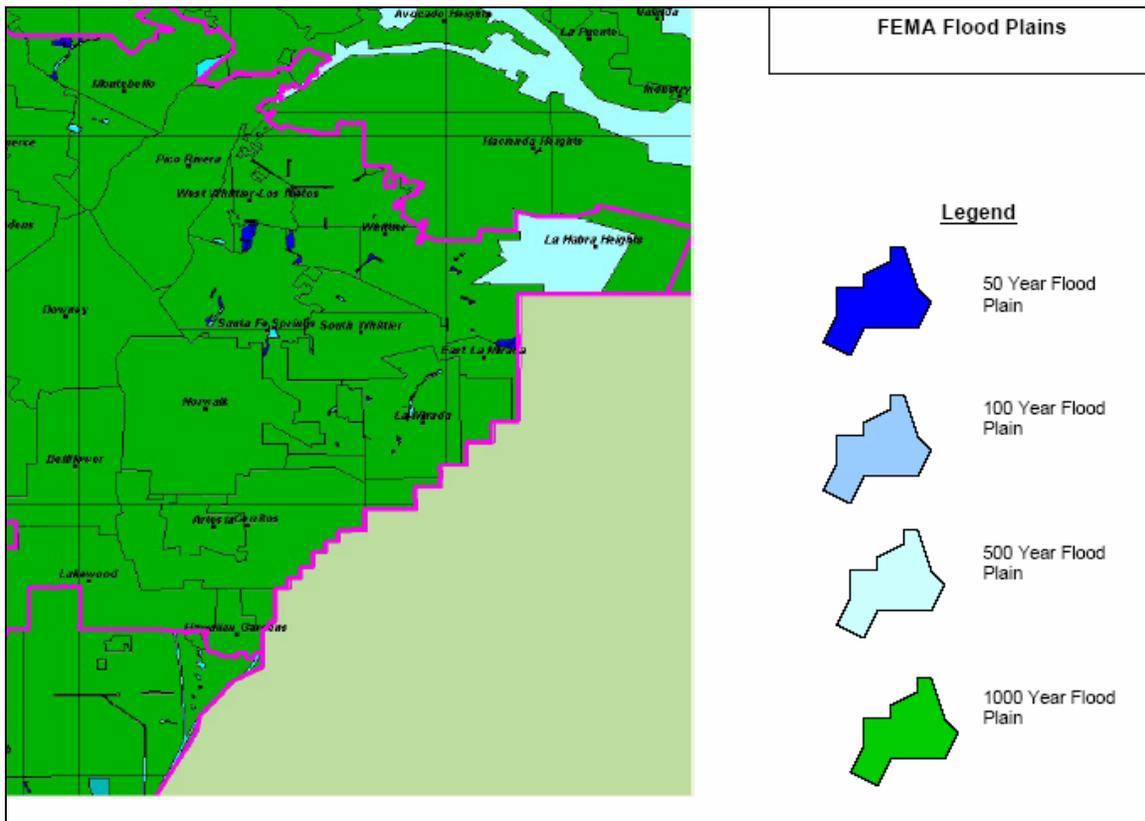
Map showing the flood inundation pattern from the Whittier Narrows Dam



Flood Risk

The Planning Jurisdictions rated Flood as a Moderate risk,

The City in its entirety was previously located within a designated AR Flood Zone, which indicates that there is a flood risk from the San Gabriel and Rio Hondo Rivers. Upstream flood control measures have been implemented. The flood zone designation resulted in higher flood insurance rates for property owners. (California AR Fact Sheet 1996). Improvements to local river and dam areas have been accomplished and the petition to remove the AR flood zone designation was approved. The City of Pico Rivera is now rated to have a 1000 year flood risk



Flood Loss Information

California has a chronic and destructive flood history. Of seventy-two federally declared disasters in the state between 1950 and 2000, half were flood related.

While the "Great Flood" of 1861-62 may be unmatched in scope, the devastating effects of recent floods far exceed the damage of a century ago. Despite the construction of massive and relatively effective flood control projects, California remains vulnerable to flooding. A steady rise in population and accompanying development contribute to increased flood risks throughout the state.

Between 1992 and 2002, every county in California was declared a federal disaster area at least once for a flooding event. The counties of Los Angeles, Orange, and San Bernardino were declared federal flood disaster areas five times, and sixteen other counties were declared disaster areas four times.

The South Coast hydrologic region extends up from the U.S.-Mexico border to the Tehachapi, San Bernardino, San Gabriel, and San Jacinto mountains. Nearly one-third of the area is coastal plain.

Major stream systems in the South Coast region include:

- Calleguas Creek Basin
- Malibu and Santa Monica Bay streams
- Ventura River
- Santa Clara River
- Los Angeles River
- San Gabriel River
- Santa Ana River
- Santa Margarita River
- San Luis Rey River
- San Dieguito River
- San Diego River
- Sweetwater River
- Otay-Tijuana River

This region contains major urban centers, including the counties of Los Angeles, Orange, and San Diego. Much of the flooding is sudden and severe, resulting in massive slides, debris flows, and mudflows. Typical of the flooding that occurs in this area were the 1969 winter storms that killed forty-seven and resulted in \$300 million in property damage. During these storms, an alluvial flood and debris flow on Deer Creek in San Bernardino County killed eleven. Normally Deer Creek is dry and is not considered a special flood hazard area on the National FIRMs. However, the region has experienced tremendous population growth since 1969 and the area of the Deer Creek alluvial fan is now home to several public schools and Ontario International Airport.

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Flood Type	Problems
Alluvial Fan	<p>Alluvial fan flooding occurs in the steep arid or semiarid mountains found throughout the state. Alluvial fans are fan-shaped deposits of eroded rock and soil carried out of mountains and into valley floors by landslides, mudslides, mudflows, and surface runoff (sheetflows and streamflows.) At the beginning of the valley, alluvial fans are steep and narrow with boulders and other coarse material. The deposited material becomes increasingly fine as the gradient decreases and the material, mainly gravels, sand and mud, spreads.</p> <p>When rain falls, runoff from the canyon walls flows as a high-velocity sheet that channels into rivulets, and then to natural drainage courses. The rapidly moving water often carries large boulders and other material from the watershed depositing them into runoff channels, blocking the flow of water. Floodwater then spills out onto the fan, with each event finding a new channel that soon fills up with deposits and overflows. Flooding in alluvial fans often can cause greater damage than clear-water flooding.</p>
Coastal	<p>Coastal flooding and erosion present some of the most complex and serious high-risk problems. In California, coastal erosion is most often caused by a combination of factors: winter storms, rising sea levels, tidal action, currents and waves, and high winds.</p>
Flash	<p>Flash floods are quick events, particularly where the topography enhances rainfall from Pacific or Gulf storms and thunderstorms. Flash floods are caused by the rapid buildup of runoff after high-intensity rainfall. The precipitation is often so intense that both perennial streams and dry watercourses are rapidly transformed into torrents, sweeping away whatever lies in their path. Loss of life in such a flooding is common because of the suddenness of high flows.</p> <p>A flash flood can occur in mountainous regions and urban areas. In the mountains, a stream level may rise quickly in a heavy rainstorm. Dry desert washes, especially those near mountains, can reach flood stage within minutes as a result of thunderstorms miles away.</p> <p>Urban flash flooding can occur in any terrain. It is particularly aggravated where natural cover has been removed to construct buildings, roads and parking lots. Streets become rivers, inundating vehicles and causing heavy damage to residential and industrial properties situated along stream channels.</p>
Fluvial	<p>California rivers generally flow west to the Pacific Ocean and may fall as much as 5,000 feet within the first 20 miles. This relatively steep slope creates a high-velocity flow that carries eroded material. As the slope of the river flattens, the velocity slows and the material is deposited. As a result, the lower reaches of many streams pass through the sandy alluvial plains they have formed.</p> <p>Flood flows can cause these streams to migrate, resulting in a higher and wider floodplain. Developed areas on land originally outside the defined floodplain can later flood.</p>
Lake	<p>Lake level fluctuations primarily concern shoreland property owners, but impact local, state and federal agencies with regulatory or financial responsibilities for water and related land use associated with lakes. Both natural and human actions cause changing lake levels. Natural factors include direct precipitation, surface runoff, evaporation, ground water inflow, ice formation, aquatic growth, meteorological disturbances, and, in larger lakes, tidal and crustal movement. Human factors include dredging, diversion, consumptive uses and intruding structures.</p>
Levee	<p>Levees are a basic means of providing flood protection along rivers and waterways in regions where development exists, or is planned, and in agricultural areas. Levees confine floodwaters to the main river channel or protect inland areas from high tides.</p> <p>The causes of levee problems are structural failures, foundation failures of underlying soils, and overtopping by flood flows, tides and waves. Contributing factors include poor construction materials, erosion by current and wave action, seepage through or under the levee, burrowing rodents, and improper repairs. Lack of adequate and regular maintenance to correct these problems also contributes to levee failure. Most failures are composites of several of these factors.</p>
Mudslides	<p>Mud floods and mudflows cause several types of flood damage that are not characteristic of clear-water flooding. These include:</p> <ul style="list-style-type: none"> • The force of debris-laden water, which can be tens or hundreds of times greater than that generated by clear water, destroys retaining walls and other protective works; • Mud and debris may fill drainage channels, river or stream channels, and sediment basins, causing otherwise normal runoff to suddenly inundate areas outside the floodplains; and • Sediment and debris are more damaging to houses and their contents than clear water. Frame structures are often total losses, and if they remain intact, sediment and mud must be removed and washed out. Stains, mildew and dry rot often result. <p>Major floods almost always involve heavy intrusions of mud, sediment and debris. Such conditions are caused or worsened by forest and brush fires. Once the hills have been denuded of vegetation, there is more runoff and less infiltration. Even light rainfall can develop into rapid runoff with severe erosion occurring in such areas.</p>
Riverine	<p>Riverine flooding, the most common type of flooding in the state, occurs when a stream channel fills with more water than it can carry. The water rises and flows over the channel banks onto the adjacent floodplain.</p>
Seiche and Tsunami	<p>Tsunamis, or seismic sea waves, are usually created by undersea earthquakes or landslides. Seiches are similar, large waves in lakes. Waves are generated by a crustal disturbance giving a vertical impulse to the sea surface. These are long-period waves that travel long distances at speeds of up to 600 miles per hour with little or no loss of energy. When tsunami waves approach a coastal region in which water depth decreases rapidly, their height is increased by refraction, shoaling, and local bay or harbor conditions, and speed is increased. Tsunamis frequently arrive in a series of spaced intervals.</p>

National Flood Insurance Program (NFIP) and the Community Ratings System (CRS)

The NFIP provides federally supported flood insurance in communities that regulate development in their floodplains. The Community Ratings System (CRS) was implemented in 1990 as a program for recognizing and encouraging community floodplain management activities that exceed the minimum NFIP standards. The CRS encourages comprehensive planning to address the community's flooding problems and provides credit for preparing, adopting, implementing, evaluating, and updating a comprehensive FMP.

The City of Pico Rivera has been a voluntary participant in the CRS established by Federal Emergency Management Agency (FEMA). This program provides a discount on flood insurance premiums for participating property owners, including those properties located within the designated Special Flood Hazard Areas defined by the Flood Insurance Rate Maps (FIRMs).

El Niño

On February 9, 1998, President Clinton, in response to a request from Governor Wilson, declared a major disaster for 27 counties in the State of California. The disaster was designated as FEMA-1203-DR-CA. On February 13, 1998 four additional counties were added; on February 26, four more counties were added, and on March 6, 1998, six additional counties were designated, bringing the total to 41.

The County of Los Angeles established a special task force comprised of county department members to distribute sandbags and clear flood channels. In Monterey County, farmers and landowners along the Salinas River banded together to reduce flooding that caused \$240 million in damages in 1995. They formed a coalition and spent \$2 million to clean out vegetation, sandbars, and other flow impediments along 40 miles of the river, and increased water flow capacity by 33 percent. As a result, the Salinas River did not flood during the El Niño '98 Storms. In anticipation of El Niño-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 Niño 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 Niño '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 Niño '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 Norte, Fresno, Glenn, Humboldt, Kern, Lake, Los Angeles, Marin, Mendocino, Merced, Monterey, Napa, Orange, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Sutter, Tehama, 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.

Economic Disruption

Economic Disruption is rated as a moderate Priority Risk Hazard by the Planning Jurisdictions

Disasters of any type intensify economic disruption and cause job losses and business closures.

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.

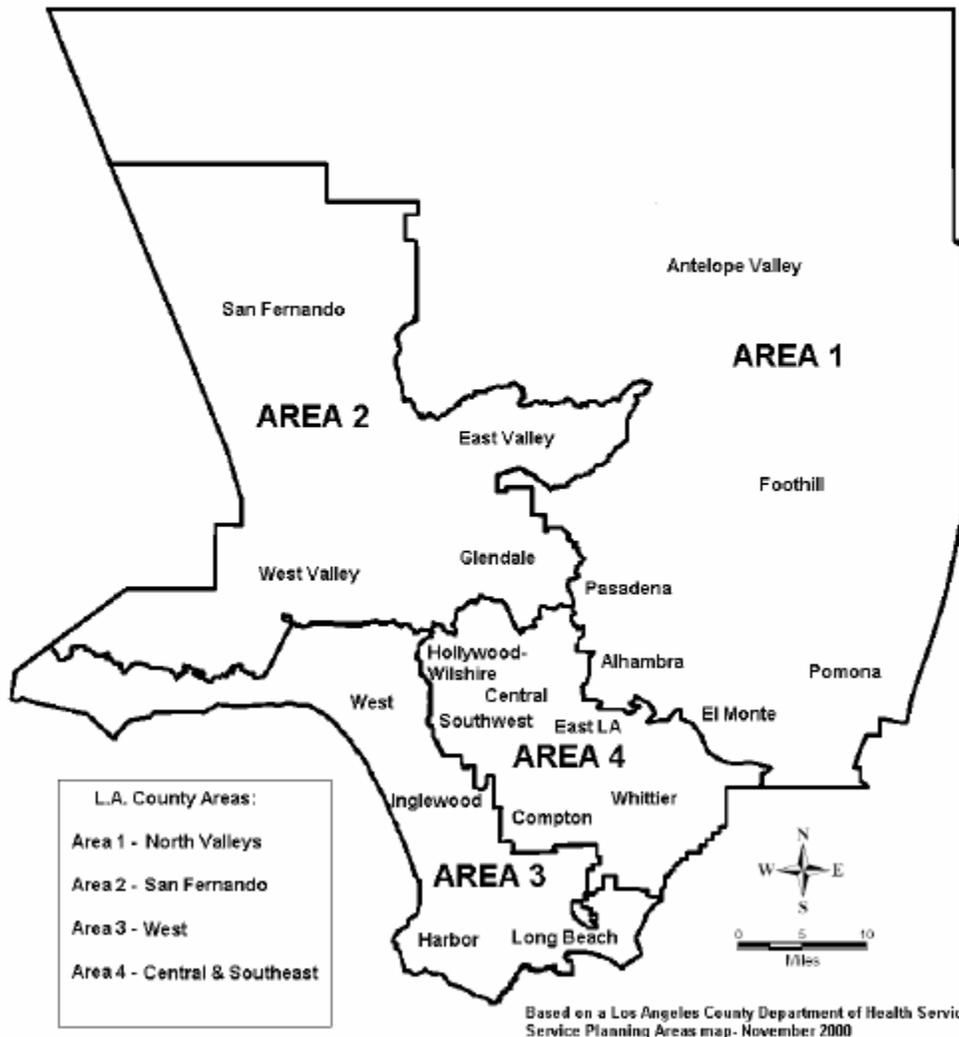
Recession

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.

Los Angeles County



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

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
 VERSION 1.1 (NOVEMBER 2004)

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%	60%	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

Terrorism & Weapons of Mass Destruction

Terrorism and WMD are rated Moderate Priority Risk Hazards by the Planning Jurisdictions

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.

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.

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 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. 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.

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

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

There will be a stronger reaction from the public than with other types of incidents. The 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.

1. 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.
2. Support facilities, such as utility stations and 911 centers along with critical infrastructures, are at risk as targets.

3. 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

Biological & Chemical Terrorism

The Public Health Response to Biological and Chemical Terrorism: Interim Planning Guidance for State Public Health Officials (hereafter referred to as the Planning Guidance) outlines steps for strengthening the capacity of the public health system to respond to and protect the nation against the dangers of a terrorism incident. Although the Planning Guidance focuses on the biological and chemical terrorism preparedness efforts of state-level health department personnel, it can be used as a planning tool by anyone in the response community, regardless of his or her position within that community or level of government.

The public health community at large also can use this document to improve its terrorism preparedness and develop terrorism response plans. The preparedness program outlined in this Planning Guidance, once implemented, should improve the ability of all public health agencies to respond to emergency situations arising from all sources, not just terrorism.

The Planning Guidance focuses on the capabilities that state health departments are likely to need to respond effectively to a terrorism incident. Despite the public health focus of this document, the terrorism plan ultimately should not be agency-specific. Instead, the terrorism plan should be integrated, outlining the roles and responsibilities of all agencies that participate in a response. This coordinated terrorism plan should then be annexed to the states all-hazard Emergency Operations Plan (EOP)

Background

The intentional release of sarin, an organophosphate nerve agent, into the Tokyo subway system helped to focus the United States on its need to prepare for what was once unthinkable. Aum Shinrikyo, the group responsible for the Tokyo incident, disbursed botulinum toxin and anthrax bacteria, and the group attempted to obtain Ebola (1).

The World Trade Center and Oklahoma City bombings confirm that terrorism is not an event that occurs only on foreign soil. Terrorism incidents or threats involving *Salmonella* (2) and ricin (3) amply demonstrate that the United States is vulnerable not only to bombs but to biological and chemical threats as well.

These and other events caused health departments across the country to consider their ability to respond to a terrorism incident. In addition to their more traditional responsibilities in disease surveillance and management, health departments are defining their roles to respond effectively to an intentional release of biological organisms or hazardous chemicals into an unsuspecting population.

Because states differ in size, population, risks, needs, and capabilities, terrorism preparedness and response efforts inevitably must differ. This document does not establish a "one-size-fits-all" model; rather, it addresses important areas of preparedness and response that can be tailored to meet the needs of individual jurisdictions. Health department officials should consider the information contained in this guidance, identify the health and medical effects that an explosion or the intentional release or threatened release of a biological organism or hazardous chemical could have on the population, and prepare to address the public health consequences of those effects.

Well-developed surveillance and epidemiologic capacity is the foundation on which health departments will detect, evaluate, and design effective responses to terrorism events. Not only will this capacity facilitate the initial detection and response in a terrorism event, it will be essential to monitoring the impact of these events and the effectiveness of public health responses. Detection of acute or insidious terrorism attacks using biological (or certain chemical) agents also will require linking of data from a variety of sources. An effective public health response will depend on the timeliness and quality of communications among numerous public health agencies at local, state, and federal levels; clinicians; laboratories; poison centers; medical examiners; and other health response partners.

Complementing the need for accurate and timely case reports is the need for expertise to analyze the information properly. Epidemiologic expertise is critical to judging whether the incident involves biological or chemical agents or is a consequence of a natural phenomenon, an accident, or terrorism. Expertise also is critical in determining the likely site and time of the exposure; size and location of the population exposed; prospect for delayed exposure or secondary transmission of an infectious agent; and whether any people should receive prophylaxis (either medications or vaccines) and, if so, which population groups.

Timely and accurate information and analysis must be coupled with effective and rapid dissemination of information to those who need to know (e.g., response partners and the public) to instill confidence in both the short- and long-term response of the affected community.

Biological & Health Emergencies

Biological and Health Emergencies are rate moderate Priority Risk Hazards by the Planning Jurisdictions Influenza (Flu)

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

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

Biology of Influenza

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

A person's immunity to the surface antigens, including hemagglutinin, reduces the likelihood of infection and severity of disease if infection occurs. Antibody against one influenza virus type or subtype confers limited or no protection against another. Furthermore, antibody to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent development of antigenic variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for the usual incorporation of ≥ 1 new strains in each year's influenza vaccine.

Influenza Epidemic

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

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

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

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

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

Influenza Pandemic

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

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

Influenza Pandemic Start

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

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

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

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

Influenza Pandemic Impact

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

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

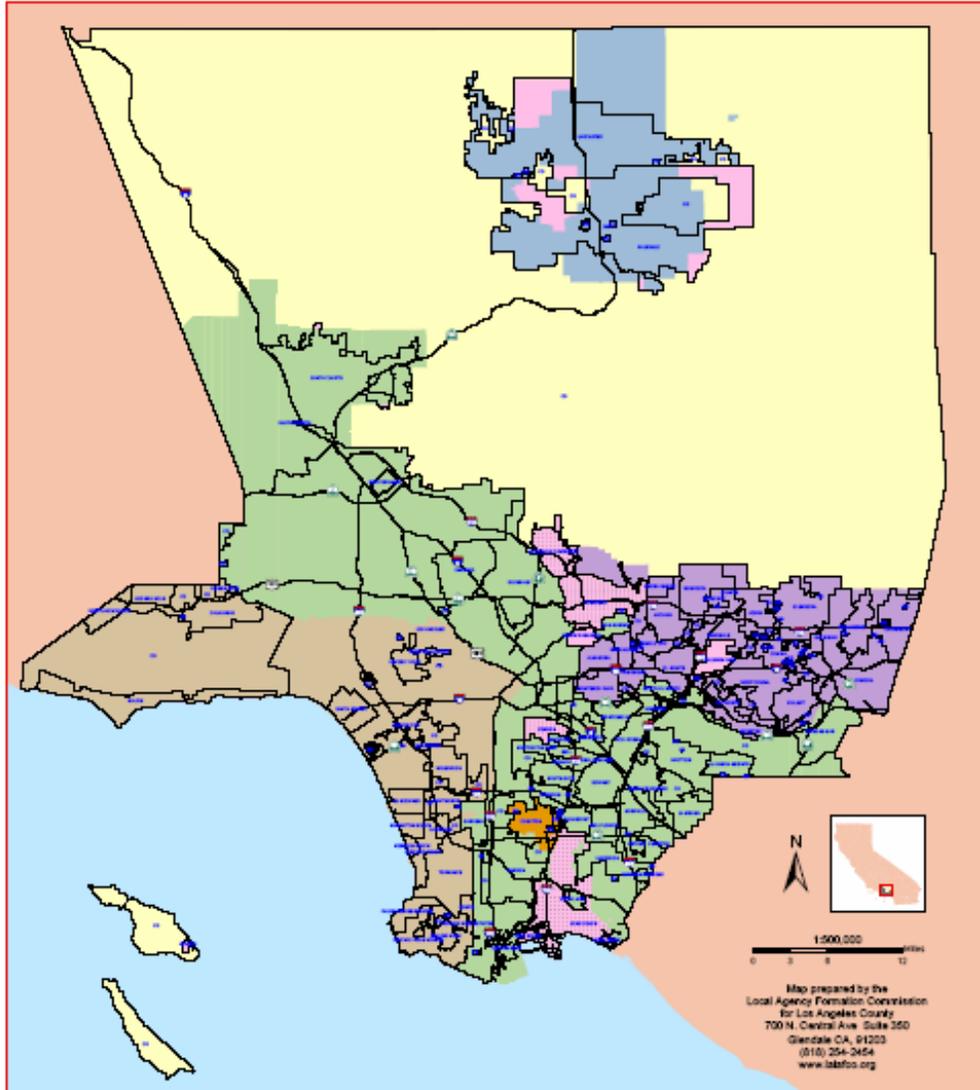
As of August 17, 2004, a total of 189 WNV infections have been reported from the following local health jurisdictions: San Bernardino (76), Los Angeles (59), Riverside (40), Orange (6), Imperial (1), Kern (2), Fresno (2), Tulare (1), Ventura (1) and Yolo (1) counties. Thirteen of these WNV infections were initially detected in asymptomatic individuals through screening done at blood banks- one of these individuals later became symptomatic. Of the 177 WNV cases with symptoms, 80 are classified as West Nile fever cases, 74 are classified as West Nile neuroinvasive disease, and 23 are of unknown status. The median age for all cases where data was available = 50 years (range: 9 – 91 years). Median age for West Nile fever cases = 46 years (range: 9 – 82 years). Median age for West Nile neuroinvasive disease cases = 59 years (range: 15 – 91 years). 115/177 (65%) of the cases are male. There have been five fatalities to date in California in Orange (1), San Bernardino (2) and Los Angeles (2) counties.

West Nile Virus Facts

1. West Nile virus (WNV) is a mosquito-borne disease that is common in Africa, west Asia and the Middle East .
2. West Nile virus was first detected in the United States in New York in 1999. Since then, WNV has spread to 46 states, Canada, and Mexico .
3. In 2003, three locally acquired human WNV cases were detected in residents of Los Angeles, Imperial, and Riverside counties, and WNV activity was detected in dead birds, mosquitoes, sentinel chickens, and a horse in six southern California counties. West Nile virus has also been detected in 2004 in southern California.
4. Last year there were almost 10,000 human cases of WNV detected, including 262 deaths in the United States.
5. People usually get WNV from the bite of an infected mosquito. There is also evidence that WNV can be acquired via a blood transfusion or organ transplant from an infected donor.
6. Most people who are bitten by a mosquito with WNV will not get sick. People who do become ill may experience mild to moderate flu-like symptoms like fever, headache and body ache. It is estimated that less than 1% of the people who are infected with WNV become severely ill and require hospitalization. The elderly and immuno-compromised are particularly susceptible to illness caused by WNV.
7. Currently there is no specific treatment for WNV infection. Since it is a virus it does not respond to antibiotics. In severe cases hospitalization and supportive care is important.
8. California has a long history of conducting surveillance for mosquito-borne viruses and has taken active steps to ensure early detection of WNV. Due to ongoing collaboration between over 70 local mosquito and vector control agencies and state public agencies, California is well prepared to detect, monitor, and respond to WNV. These agencies use a variety of scientific techniques and products to control mosquitoes in their earliest stages and play a key role in reducing the risk of WNV. Also California has launched a statewide public education effort about personal protection measures and reporting dead birds.
9. The public is encouraged to assist in the efforts to detect and monitor WNV by calling the WNV hotline if they find a crow, raven, magpie, jay, sparrow, finch, or hawk that has been dead for about a day. Birds play an important role in maintaining and spreading this virus. Mosquitoes acquire the virus from infected birds, and then transmit the virus to people. Evidence of the virus in dead birds is often the first indication that WNV has been introduced into a new region.



Mosquito and / or Vector Control Districts Incorporated and Unincorporated Areas of Los Angeles County



- | | | | |
|--|--|---|---|
| <ul style="list-style-type: none"> Antelope Valley
Mosquito and Vector Control District
P.O. Box 1162
Lancaster, CA 93004
(881) 942-2917
www.aantimosquito.org Compton Creek
Mosquito Abatement District
1224 S. Santa Fe Ave.
Compton, CA 90221
(310) 639-7375 Greater Los Angeles County
Vector Control District
12545 Florence Ave.
Santa Fe Springs, CA 90670
(562) 944-5555
www.glavect.org San Gabriel Valley
Mosquito & Vector Control District
1145 N. Azusa Canyon Rd.
West Covina, CA 91790
(626) 814-9466
www.sgvmosquito.org Los Angeles County West
Vector Control District
5750 Centinela Ave.
Culver City, CA 90230
(310) 415-7370
www.lawestvector.org | <ul style="list-style-type: none"> Non-District Mosquito and / or Vector Control City of Long Beach
Health and Human Services
2525 Grand Ave. Rm. 200
Long Beach, CA 90815
(562) 570-4132
www.longbeach.gov City of Pasadena
Public Health Department
1845 N. Fair Oaks Ave.
Pasadena, CA 91103
(626) 744-6025
www.ci.pasadena.ca.us/publichealth/ City of LaCañada-Flintridge City Hall
1327 Foothill Blvd.
La Cañada Flintridge, CA 91011
(818) 790-6882
www.lacanadaflintridgecityhall.org/index.htm City of Vernon
4305 South Santa Fe Ave.
Vernon, CA 90058
(323) 626-1425
www.cityofvernon.org/index1.htm | <p>Los Angeles County
Public Health
Department of Health Services</p> <p>Acute Communicable Disease Control Program
313 N. Figueroa St.
Los Angeles, CA 90012
(213) 240-7541
www.lapublichealth.org/act/index.htm</p> <p>Environmental Health
Vector Management
5250 Commerce Dr.
Baldwin Park, CA 91706
(626) 430-5205
www.lapublichealth.org/eh/index.htm</p> <p>Veterinary Public Health
3634 S. Western Ave., Suite 233
Los Angeles, CA 90002
(323) 733-3723
www.lapublichealth.org/vet/index.htm</p> <p>State of California Department of Health Services
Communicable Disease Control
Toll Free Telephone: 877-960-2473
E-mail: arboinfo@dhhs.ca.gov
www.vectrils.ca.gov</p> | <ul style="list-style-type: none"> Cities not covered by Mosquito and/or Vector Control Districts Unincorporated County areas not covered by Mosquito and/or Vector Control Districts <p><small>This map was made possible by the Epidemiology and Laboratory Capacity (ELC) and Emerging Infections Program (EIP) Cooperative Agreement Funds (Grant No. U55CCU912801-0702) from the Centers for Disease Control and Prevention (CDC) and dedicated professionals for the independent, city, county and state public services in Los Angeles County.</small></p> <p align="right">030104</p> |
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(Map provided by Los Angeles Vector Control)

Severe Acute Respiratory Syndrome (SARS)

Los Angeles County includes major port cities, and as such diseases anywhere in the world constitute a potential threat. Severe acute respiratory syndrome (SARS), a recently recognized, contagious febrile lower respiratory infection caused by a novel corona virus called SARS-CoV, is an example of a potential threat to a port city.

The worldwide outbreak of SARS that occurred between November 2002 and July 2003 most likely originated in China and then spread through travel. During this outbreak 22 potential SARS cases were investigated in Los Angeles. Seven were considered probable SARS but none of these cases had a specimen that was positive for SARS-CoV infection. The investigation and monitoring required for 22 potential cases was considerable.

It is possible that SARS may re-emerge; therefore, it is important that Los Angeles County be prepared to immediately identify cases and contain the disease.

The California Health and Safety Code (H&S), the California Code of Regulations (CCR) and the Los Angeles County Code (LACC) grant the Los Angeles County Health Officer authority to collect records and data with respect to communicable disease, initiate disease control measures, control property and manage persons (including isolation and quarantine).

SARS Case Count

During November 2002-July 2003, a total of 8,098 probable SARS cases were reported to the World Health Organization (WHO) from 29 countries. In the United States, only 8 cases had laboratory evidence of infection with SARS-CoV. Since July 2003, when SARS-CoV transmission was declared contained, active global surveillance for SARS-CoV disease has detected no person-to-person transmission of SARS-CoV. CDC has therefore archived the case report summaries for the 2003 outbreak.

During the 2003 epidemic, CDC and the Council of State and Territorial Epidemiologists (CSTE) developed surveillance criteria to identify persons with SARS in the United States. The surveillance case definition changed throughout the epidemic, to reflect increased understanding of SARS-CoV disease.

In California, there were a total of 29 cases, 22 of which were suspect, 5 were probably SARS and 2 were confirmed.

SARS Surveillance

The key to controlling a SARS outbreak is prompt detection of cases and their contacts, followed by rapid implementation of control measures. Identification of SARS cases is the basic step in prevention efforts, whereas contact tracing provides a means to focus case-finding and containment efforts on persons who are at greatest risk of SARS-CoV disease. Two features of SARS-CoV disease pose challenges for case surveillance. First, the early signs and symptoms are not specific enough to reliably distinguish SARS-CoV disease from other common respiratory illnesses. Second, existing laboratory diagnostic tests are not adequately sensitive early in the course of illness. Therefore, risk of exposure (i.e., to another case of SARS-CoV disease or to a setting where SARS-CoV transmission is occurring) is key to considering the likelihood of a diagnosis of SARS-CoV disease.

Potential sources of SARS-CoV for future exposures include persistent infection in previously ill persons or reintroduction to humans from an animal reservoir. In the absence of SARS-CoV transmission worldwide, the most likely sites of recurrence are the original site of introduction of SARS-CoV from animals to humans and locations where person-to-person SARS-CoV transmission previously occurred. Laboratories that contain live SARS-CoV could be a source of further transmission if compromised laboratory techniques result in laboratory-acquired infections. Because persons with SARS-CoV disease tended to appear in clusters (e.g., in healthcare

facilities, households, and a few special settings) during the 2003 outbreaks, early signals of the reappearance of the illness in U.S. communities could include unusual clusters of unexplained pneumonia.

In the presence of person-to-person SARS-CoV transmission anywhere in the world, patients with SARS-CoV disease or sites of SARS-CoV transmission become the most likely sources of exposure. Contact tracing, the identification of persons who had contact with a potential case of SARS-CoV disease or may have been exposed while present in locations (e.g., hospitals) with known SARS-CoV transmission, is essential for the implementation of appropriate measures to reduce further spread of the disease.

The overall goals of SARS surveillance are to:

- Maximize early detection of cases and clusters of respiratory infections that might signal the re-emergence of SARS-CoV disease while minimizing unnecessary laboratory testing, concerns about SARS-CoV, implementation of control measures, and social disruption.
- If person-to-person SARS-CoV transmission recurs, maintain prompt and complete identification and reporting of potential cases to facilitate outbreak control and management.
- Identify and monitor contacts of cases of SARS-CoV disease to enable early detection of illness in persons at greatest risk.

Lessons Learned

The following lessons from the global experience with SARS surveillance have been considered in developing this document:

- Astute healthcare providers will likely be the key to early detection and reporting of initial cases of SARS-CoV disease.
- The key to recognizing persons with SARS-CoV disease is identification of an epidemiologic link of exposure to another case of SARS-CoV disease or to a setting (e.g., hospital) where SARS-CoV transmission is occurring.
- Screening criteria for epidemiologic linkages need to reflect 1) the status of SARS-CoV transmission globally and the risk of exposure from international and domestic travel, and 2) the status of SARS activity in the community, at the work site, or in other settings where a patient with SARS-like illness may have been.
- In a setting of extensive SARS-CoV transmission, the possibility of SARS-CoV disease should be considered in all persons with a fever or lower respiratory illness, even if an epidemiologic link cannot be readily established.
- Healthcare facilities were disproportionately affected by SARS-CoV, and healthcare workers were among the first and most severely affected groups in every large outbreak reported.
- Contact tracing is resource intensive yet critical to containment efforts since it allows early recognition of illness in persons at greatest risk.
- Collection of appropriate and timely clinical specimens for laboratory testing is central to monitoring the status of SARS-CoV transmission at the local, state, and federal levels.
- Timely reporting of cases, updates on the clinical status and disposition of patients, real-time analysis of data, and timely dissemination of information are essential for outbreak-management decisions.

- Paper-based reporting systems are too slow and labor intensive to manage a large SARS outbreak. A rapid and efficient electronic reporting system that facilitates real-time analysis of clinical, epidemiologic, and laboratory information at the local level is essential.
- Frequent communication and data sharing among public health officials and healthcare providers are needed to update the status of potential and confirmed cases of SARS-CoV disease.

Avian Influenza (Bird Flu)

Influenza viruses that infect birds are called “avian influenza viruses.” Only influenza A viruses infect birds. All known subtypes of influenza A virus can infect birds. However, there are substantial genetic differences between the subtypes that typically infect both people and birds. Within subtypes of avian influenza viruses there also are different strains (described in “Strains”).

Avian influenza H5 and H7 viruses can be distinguished as “low pathogenic” and “high pathogenic” forms on the basis of genetic features of the virus and the severity of the illness they cause in poultry; influenza H9 virus has been identified only in a “low pathogenicity” form. Each of these three avian influenza viruses (H5, H7, and H9) can theoretically be partnered with any one of nine neuraminidase surface proteins; thus, there are potentially nine different forms of each subtype (e.g., H5N1, H5N2, H5N3 ...H5N9).

Below is summary information about these three prominent subtypes of avian influenza virus:

Influenza A H5

- Potentially nine different subtypes
- Can be highly pathogenic or low pathogenic
- H5 infections have been documented among humans, sometimes causing severe illness and death

Influenza A H7

- Potentially nine different subtypes
- Can be highly pathogenic or low pathogenic
- H7 infection in humans is rare, but can occur among persons who have close contact with infected birds; symptoms may include conjunctivitis and/or upper respiratory symptoms

Influenza A H9

- Potentially nine different subtypes
- Documented only in low pathogenic form
- Three H9 infections in humans have been confirmed.

Spread of Avian Influenza Viruses among Birds

Avian influenza viruses circulate among birds worldwide. Certain birds, particularly water birds, act as hosts for influenza viruses by carrying the virus in their intestines and shedding it. Infected birds shed virus in saliva, nasal secretions, and feces. Susceptible birds can become infected with avian influenza virus when they have contact with contaminated nasal, respiratory, or fecal material from infected birds. Fecal-to-oral transmission is the most common mode of spread between birds.

Most often, the wild birds that are host to the virus do not get sick, but they can spread influenza to other birds. Infection with certain avian influenza A viruses (for example, some H5 and H7 strains) can cause widespread disease and death among some species of domesticated birds.

Avian Influenza Infection in Humans

Although avian influenza A viruses do not usually infect humans, several instances of human infections and outbreaks of avian influenza have been reported since 1997. Most cases of avian influenza infection in humans are thought to have resulted from contact with infected poultry or contaminated surfaces. However, there is still a lot to learn about how different subtypes and strains of avian influenza virus might affect humans. For example, it is not known how the distinction between low pathogenic and highly pathogenic strains might impact the health risk to humans. Of the documented cases of human infection with avian influenza viruses, illnesses caused by highly pathogenic viruses appear to be more severe.

Because of concerns about the potential for more widespread infection in the human population, public health authorities closely monitor outbreaks of human illness associated with avian influenza. To date, human infections with avian influenza viruses detected since 1997 have not resulted in sustained human-to-human transmission. However, because influenza viruses have the potential to change and gain the ability to spread easily between people, monitoring for human infection and person-to-person transmission is important.

To date, there have been no recorded cases of Avian Influenza in California. Documented cases in North America include: British Columbia, Canada; The Eastern United States; and Texas.

Small Pox

Smallpox virus is a high-priority "Category A" agent that poses a risk to Los Angeles County, California and national security because it can be easily disseminated and transmitted from person to person, results in high mortality rates and has the potential for major public health impact, might cause public panic and social disruption, and requires special action for public health preparedness.

The Los Angeles County Department of Health Services (LAC DHS) developed this Smallpox Preparedness, Response and Recovery Plan for the County to prepare for the possibility of an outbreak of smallpox in the County.

If an outbreak of smallpox were to occur, several factors could contribute to a more rapid spread of smallpox than was routinely seen before this disease was eradicated in 1977. These factors include: 1) virtually non-existent immunity to smallpox in the absence of naturally occurring disease and the discontinuation of routine vaccination in the United States in the early 1970's, 2) potentially delayed recognition of smallpox by health personnel who are unfamiliar with the disease, 3) increased mobility and crowding of the population, and 4) potential use of higher virulence "weaponized" viruses with decreased incubation periods. Because of these factors, a single case of smallpox would require an immediate and coordinated public health and medical response to contain the outbreak and prevent further infection of susceptible individuals.

Vaccination

The federal government has not yet provided definitive guidance on the extent of preparedness vaccination (smallpox vaccination of persons prior to a confirmed case of smallpox). It is anticipated that the guidance will be forthcoming in the near future. Such guidance, and release of sufficient quantities of smallpox vaccine, may be for: (1) specified first responders only, (2) a larger group of health care workers, law enforcement, and emergency responders, or (3) the entire population on a voluntary basis. Guidance may be provided in a phased manner for these, or other, groups over time.

The LAC DHS is prepared to implement the guidance received from the federal government on preparedness vaccination. Since this vaccination will take place prior to a smallpox emergency and there will be no urgency to

complete vaccination within a few days (as required in a smallpox emergency), existing facilities and staff are deemed sufficient to carry out preparedness vaccination of the first two groups. It may even be that federal personnel will be utilized for this preparedness vaccination of limited numbers of persons. LAC DHS has developed its own recommendations for preparedness smallpox vaccination prioritization.

Los Angeles County Smallpox Preparedness Plan

Monkey Pox

The Centers for Disease Control and Prevention (CDC) and state and local health departments continue to investigate cases of monkeypox among persons who had close contact with wild or exotic mammalian pets or persons with monkeypox. Results of serologic testing, polymerase-chain-reaction analysis, viral culture and gene sequencing performed at the CDC indicate that the causative agent is monkeypox virus, a member of the orthopoxvirus group of viruses. CDC is updating previous interim guidance concerning infection control precautions and exposure management in the health-care and community settings. The guidance will be further updated as additional information about the epidemiology of disease transmission is better understood.

Limited data on transmission of monkeypox virus are available from studies conducted in Africa. Person-to-person transmission is believed to occur primarily through direct contact and also by respiratory droplet spread. Transmission of monkeypox within hospitals has been described, albeit rarely. Extrapolating from smallpox for which airborne transmission has been clearly described, airborne transmission of monkeypox virus cannot be excluded, especially in patients presenting with cough.

To date in the United States there has been no evidence of person-to-person transmission of monkeypox. However, recovery of monkeypox virus from skin lesions and tonsillar tissue demonstrates the potential for contact and droplet transmission, and at least a theoretical risk for airborne transmission.

A recent modification of CDC's infection control guidance is based on the accumulating experience in the United States that suggests a relatively low risk of person-to-person transmission. All health-care settings, i.e., hospitals, emergency departments, physician offices, have the capacity to care for monkeypox patients and protect health-care workers and other patients from exposure.

Centers for Disease Control and Prevention

Low Risk Priority Hazards

Civil Unrest

Civil Unrest was rated a low risk by the Priority Risk Hazard by the Planning Jurisdictions.

The potential for a Civil Disturbance originating in Pico Rivera is considered very unlikely; the potential for a civil disturbance in Los Angeles County that could negatively impact the Pico Rivera Planning Jurisdictions is somewhat likely. However, the Planning Jurisdictions cannot impact the risk beyond their borders and can only support the County's effort to defuse and respond to a potential emergency. Pico Rivera is not isolated from Civil unrest as it is home to some Hispanic Gang Activity. Hispanic Gangs in Los Angeles County

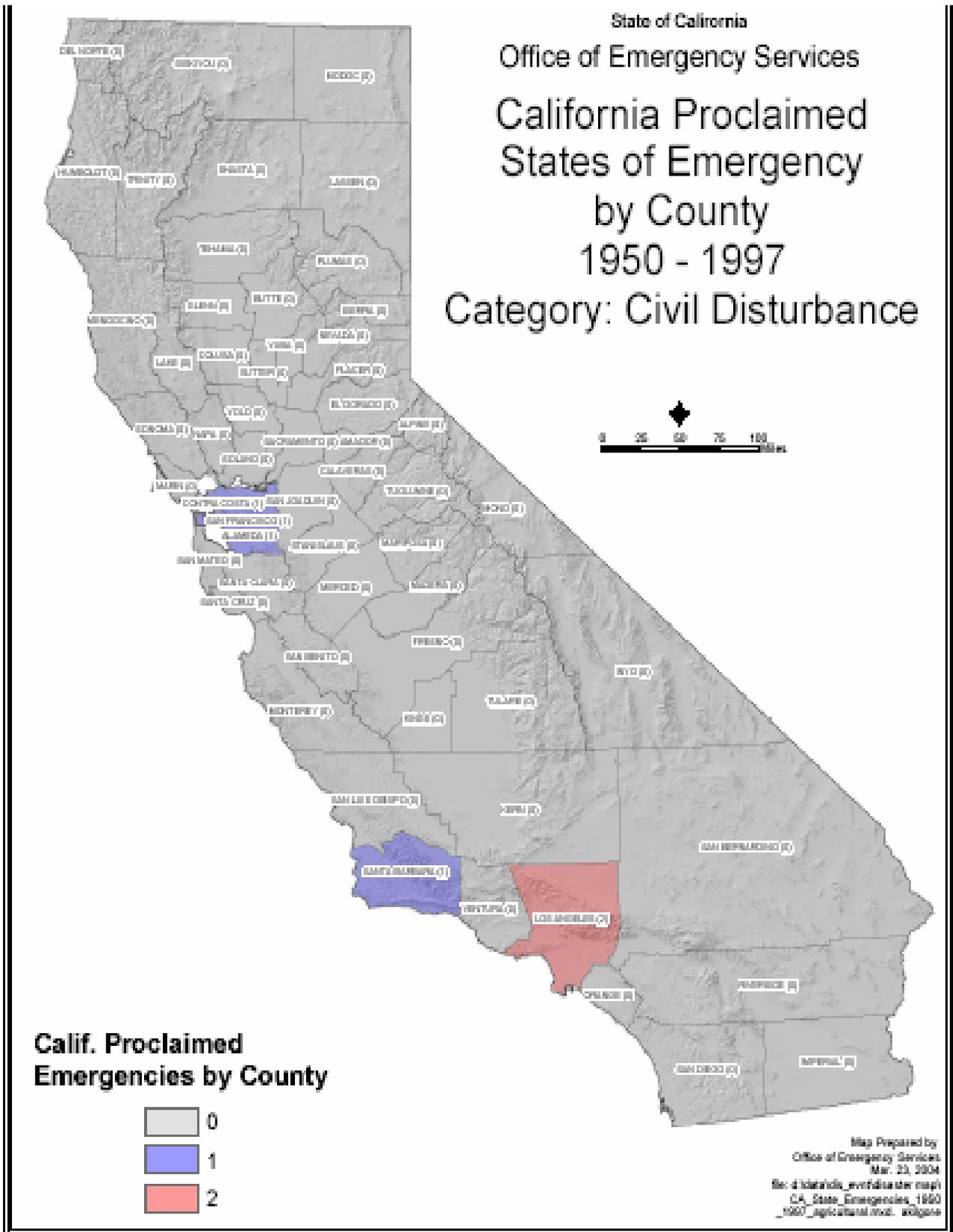
There are over 600 Latino gangs in Los Angeles County representing over 50% of the gang membership in the area and they are more geographically distributed throughout the region than Black, Asian and White gangs. They are found in great numbers in the San Fernando Valley, San Gabriel Valley, the beach communities, Long Beach, Compton and South Central Los Angeles.

Below is a preliminary list of cities within Los Angeles County where Hispanic gangs are active.

Alhambra	Cudahy	Lakewood	Pico Rivera
Antelope Valley	Culver City	Lancaster	Pomona
Artesia	Downey	Lawndale	Redondo Beach
Atwater	Duarte	Lomita	Rosemead
Azusa	El Monte	Long Beach	San Dimas
Baldwin Park	El Sereno	Los Angeles County	San Fernando
Bell	Gardena	Los Angeles	Santa Clarita
Bell Gardens	Glendale	Lynwood	Santa Fe Springs
Bellflower	Hacienda Heights	Maywood	Santa Monica
Burbank	Hawaiian Gardens	Monrovia	South Gate
Carson	Hawthorne	Montebello	Temple
City of Commerce	Huntington Park	Monterey Park	Torrance
City of Industry	Inglewood	Newhall	Walnut
Claremont	Irwindale	Norwalk	West Covina
Compton	La Mirada	Paramount	West Whittier
Covina	La Puente	Pasadena	Whittier

Maravilla Gangs, Source Los Angeles County Sheriff's Department

All Hispanic Gangs in Los Angeles County



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. 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 an 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."

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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 Likelihood 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.
	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.

Chronology of the 1992 Los Angeles Riots		
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.

All 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

- | | | |
|---------------------------------|-------------------------------|------------------------------|
| 135 Piru | | Pacoima Pirus |
| 456 Island | East Compton Piru | Parke Nine Bloods |
| 64 Brims (defunct) | East Side Piru | Pasadena Denver Lane |
| 706 Blood | Elm Street Piru | ProJect Gangster Blood |
| 92 Bishops | Family Swan Blood 89/92 | Pueblo Bishops 52 |
| Athens Park Boys | Fruit Town Brims | Queen Street Blood |
| Aliso Village Brim (defunct) | Fruit Town Pirus | Queen Street Blood 76 Block |
| Avenue Piru Gang | Ghost Town/ES Pain | Samoan Warriors Bounty |
| Be-Bopp Watts Bishops | Harvard Park Brim | Hunters |
| Black P Stones-City | Hawthorne Piru | Scott Park Blood |
| Black P Stones-Jungles | Holly Hood Pirus | ScottsDale Piru |
| Blood Stone Pirus | Hoover Family (defunct) | Squiggly Lane Gangster |
| Blood Stone Villian | Inglewood Family Gang | Summit Street Bloods |
| Bounty Hunters | Kabbage Patch Piru | Tree Top Piru |
| Campenella Park Piru | Kalas Park Loks | Ujima Village Bloods |
| Cedar Block Piru | Leuders Park Piru | Van Ness Gangster |
| Center Park Blood | Lime Hood Piru | Village Town Piru |
| Center View Piru | Lynwood Mob Piru | Water Front Piru |
| Centinela Park Family | Mad Swan Blood | Weirdoz Blood |
| Circle City Piru | Miller Gangster Bloods | West Covina Mob |
| Crenshaw Mafia Gang | Mob Piru | West Side Piru - Compton |
| Cross Atlantic Piru | Neighbor Hood Pirus | West Side Piru - West Covina |
| Dalton Gangster Blood (defunct) | Neighborhood Pirus 145 | Hacienda Village Blood |
| DBCP | Rollin 20s NeighborHood Blood | |
| Denver Lane Blood | Original Block Piru 151 | |
| Doty Block Gang | Outlaw 20s | |
| Down Hood Mob | | |

All 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

- ▶101 Crip Gang
- ▶7th Street Watts Crip
- ▶Acacia Block Compton Crip
- ▶Altadena Block Crip
- ▶Angelo Mafia Crip
- ▶Anzac Grape Compton Crip
- ▶Atlantic Drive Compton Crips
- ▶Avalon 40's Crip
- ▶Avalon Gangster Crips 53
- ▶Avalon Ganster Crip 116
- ▶Avalon Garden Crips 88
- ▶Back Street Crip
- ▶Beach Town Mafia Crip
- ▶Big Daddyz (BDZ)
- ▶Blunt Smoking Only Gang
- ▶BOGC
- ▶Born To Jacc Crip 73rd st
- ▶Boulevard Mafia Crips
- ▶Bricc Block Crip
- ▶Broadway Gangster Crip 112
- ▶Broadway Gangster Crip 52
- ▶BudLong Crip Gang 102
- ▶Burnside Avenue Crip Gang
- ▶Butler Blocc Compton Crips
- ▶By Yourself Hustler Crips
- ▶Carver Park Compton Crips
- ▶Chester Street Compton Crips
- ▶Compton Avenue Crip, 95
- ▶DAWGS
- ▶Dirty Old Man Gang
- ▶Dodge City Crips
- ▶Don't Give a Fuck
- ▶Down Ass Pimp Gang, 109
- ▶Dragnet
- ▶DSHC 91st
- ▶Du Rocc Crip
- ▶Ducky Hood Compton Crip
- ▶East Coast Blocc Crip, 190
- ▶East Coast Blocc Crip, 118
- ▶East Coast Crip, Q102
- ▶East Coast Crip, 200
- ▶East Coast Crip, 59
- ▶East Coast Crip, 62 NHC
- ▶East Coast Crip, 66
- ▶East Coast Crip, 68
- ▶East Coast Crip, 69 Shacc Boys
- ▶East Coast Crip, 76
- ▶East Coast Crip, 89 NHC
- ▶East Coast Crip, 97
- ▶East Side DAWGS
- ▶East Side Hustler Crip 104, 108
- ▶East Side Hustler Crip 115,118
- ▶East Side Players, 97
- ▶East Side Ridaz, 64
- ▶East Side Ridaz, 59
- ▶Farm Dog Comton Crip
- ▶Four Corner Block Crip
- ▶Four Duece Crip Gang(w/s)
- ▶Four Line Drive Crip
- ▶Front Street Crip
- ▶Gangster, Hoover 52
- ▶Gardena Pay Back Crip
- ▶Geer Gang Crip
- ▶Ghost Town Crips
- ▶Grape Street Watts
- ▶Grave Yard Crip
- ▶Gundry Blocc Paramount Crip
- ▶Harbor City Crips
- ▶Hard Time Hustler Crip, 88, 93
- ▶Hard Time Hustler Crip, 103, 104
- ▶Hard Time Hustler Crip, 78
- ▶Harvard Gangster Crip, 127
- ▶Hat Gang Watts Crip
- ▶Hickery Street Watts Crip
- ▶Holmes Town Crip
- ▶Home Boys Crimino Gang
- ▶Hoover, 107
- ▶Hoover, 112
- ▶Hoover, 59
- ▶Hoover, 74
- ▶Hoover, 83
- ▶Hoover, 92
- ▶Hoover, 94
- ▶HSHG
- ▶Inglewood Village Crip
- ▶Insane Crip
- ▶Kelly Park Compton Crip
- ▶Kitchen Crip Gang, 87
- ▶Kitchen Crip Gang, 95
- ▶Kitchen Crip, 116
- ▶Latana Blocc Compton Crip
- ▶LDH 73
- ▶Lettin Niggas Have It
- ▶Osage Legend Crip, 102
- ▶Mack Mafia Crip
- ▶Mafia Crip, 99
- ▶Main Street Crip
- ▶Main Street Mafia Crip
- ▶Mansfield Gangster Crip
- ▶Marvin Gangster
- ▶Mayo Ave Compton Crip
- ▶Menlo Gangster Crip, 103
- ▶Menlo Gangster Crip, 65
- ▶McKinley Avenue Crips
- ▶Mona Park Compton Crips
- ▶Most Valuable Pimp Gangster Crip
- ▶NBGC
- ▶Neighbor Hood 90 Crip
- ▶Neighbor Hood Compton Crips
- ▶Neighbor Hood Crip 106, 102
- ▶Neighbor Hood Crip 115
- ▶Neighbor Hood Crip 67
- ▶Neighbor Hood Crip, 111, 112 (w/s)
- ▶Neighbor Hood Crip, 111, 112 (e/s)
- ▶Neighbor Hood Crip, 46
- ▶Neighbor Hood Crip, 55
- ▶Neighbor Hood Crip, 57
- ▶Neighbor Hood Crip, 59
- ▶Neighbor Hood Crip, Lynwood
- ▶Neighborhood Watts Crip
- ▶PlayBoy Huster Crip
- ▶PlayBoy Style Crip 82
- ▶PlayBoy Style Crip 101,106
- ▶Pocket Hood Compton Crip
- ▶Raymond Ave Crip 102
- ▶Raymond Ave Crip 120
- ▶Raymond Ave Crip Pasadena
- ▶RHG
- ▶Rollin' 130's
- ▶Rollin 20s Long Beach
- ▶Rollin 30s
- ▶Rollin 40s
- ▶Rollin 50s
- ▶Rollin 60s
- ▶Rollin 80's West Coast Crip
- ▶Rollin 90s NHC
- ▶Rollin 90s Westcoast
- ▶RSH Compton Crip
- ▶Santa Fe Mafia Crip
- ▶Santana Blocc Compton Crip
- ▶School Yard Crips
- ▶Sex Symbols
- ▶Shotgun Crip
- ▶Sin Town Crip 357
- ▶Six Hood Compton Crip
- ▶Sons of Samoa
- ▶South Side Compton Crips
- ▶South Side Village Crips
- ▶Stevenson Village Crip (Cold Village Dog)
- ▶Straight Ballers Society
- ▶T Zone Crip 110
- ▶Ten Line Ganster Crip
- ▶Tiny Hoodsta Crip
- ▶TMHG
- ▶Tonga Crip Gang
- ▶Tragniew Park Compton Crip
- ▶Twilight Zone Compton Crip 157
- ▶UCPS 1400 Block
- ▶Under Ground Crip
- ▶Venice Shore Line
- ▶Victoria Park Crips
- ▶Ward Lane Compton Crip
- ▶WaterGate Crip
- ▶Watts Mafia Crip Gang
- ▶Watts Playground Crip 115
- ▶We Dont Care Crip
- ▶West Boulevard Crip 28
- ▶West Boulevard Crip 64
- ▶West Covina NH Crip
- ▶West Side Mafia
- ▶Young Ass Playas

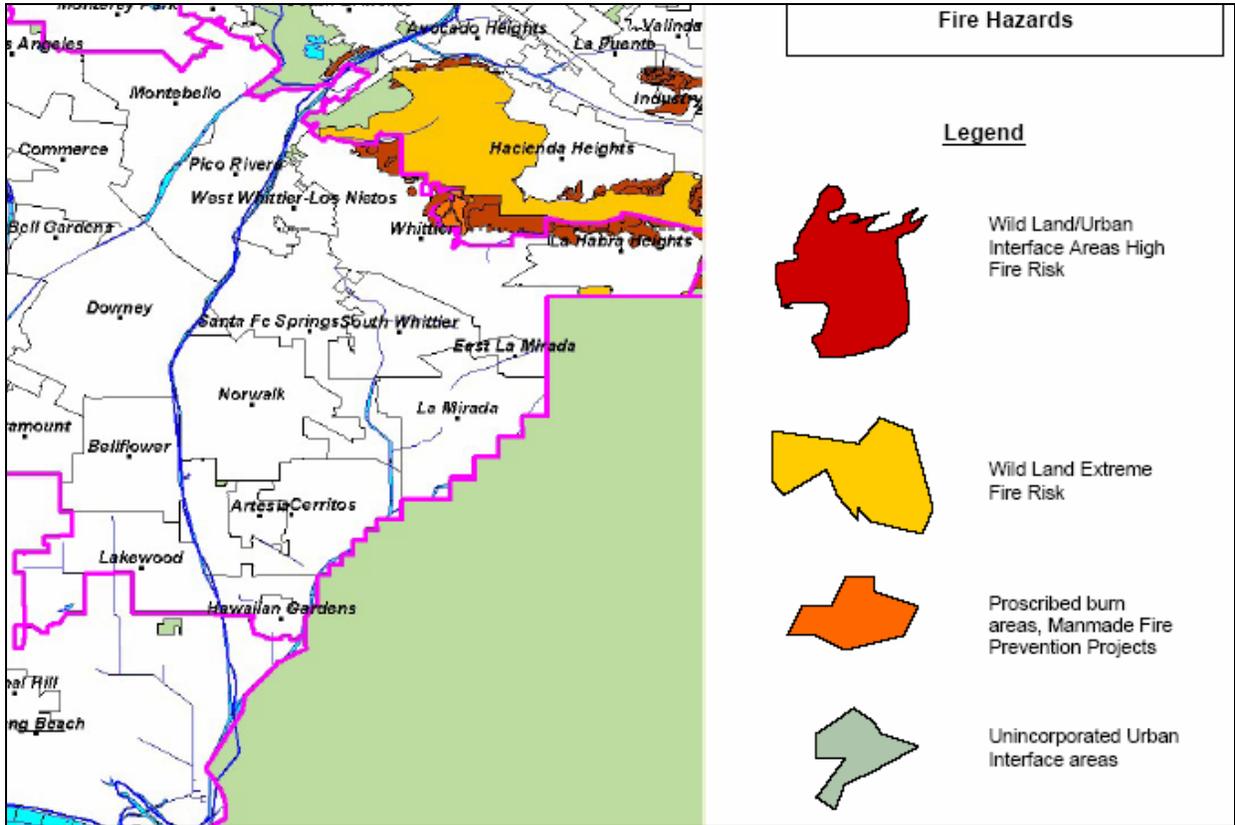
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- ▶Fudge Town Mafia Crip 105, 107
- ▶Gangster Crip, 105
- ▶Gangster Crip, 118
- ▶Gangster Crip, 42(e/s)
- ▶Gangster Crip, 43
- ▶Gangster Crip, 43 SS
- ▶Gangster Crip, 47 S
- ▶Gangster Crip, 48
- ▶Gangster Crip, 83
- ▶Gangster Crip, 87
- ▶Gangster Crip, 96
- ▶Gangster Crip, 97
- ▶Gangster Crip, 98
- ▶Nestor Ave Compton Crip
- ▶Nothing But Trouble Halldale Crip
- ▶NSG Senyo Gang
- ▶Nutty Blocc Compton Crip
- ▶Original Blocc Crip Gang
- ▶Original Hood Crip
- ▶Original Swamp Compton Crip
- ▶Palm & Oak Gangster
- ▶Palmer Blocc Compton Crips
- ▶Park Village Compton Crips
- ▶Perverts
- ▶Pimp Town Murder Squad
- ▶PJ Watts Crip
- ▶Play Boy Gangster Crip

Wildland Urban Interface & Wild Land Fire

The Planning Jurisdictions rated this risk as a low priority.

The Planning Jurisdictions could be indirectly adversely affected by Wildland Interface Fire due to the close proximity of the High and Extreme fire risk Northeast of the City.



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 (mg) of particles per cubic meter of air. Most particle monitoring devices measure particulate matter with a median diameter of 10 micrometers or less (PM₁₀). 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 PM₁₀ 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.

Estimating particulate matter concentrations from visibility assessment

Categories	Visibility in Miles	Particulate matter levels* (1-hour average, $\mu\text{g}/\text{m}^3$)
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 PM₁₀ 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 PM₁₀ or PM_{2.5} monitors.

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.

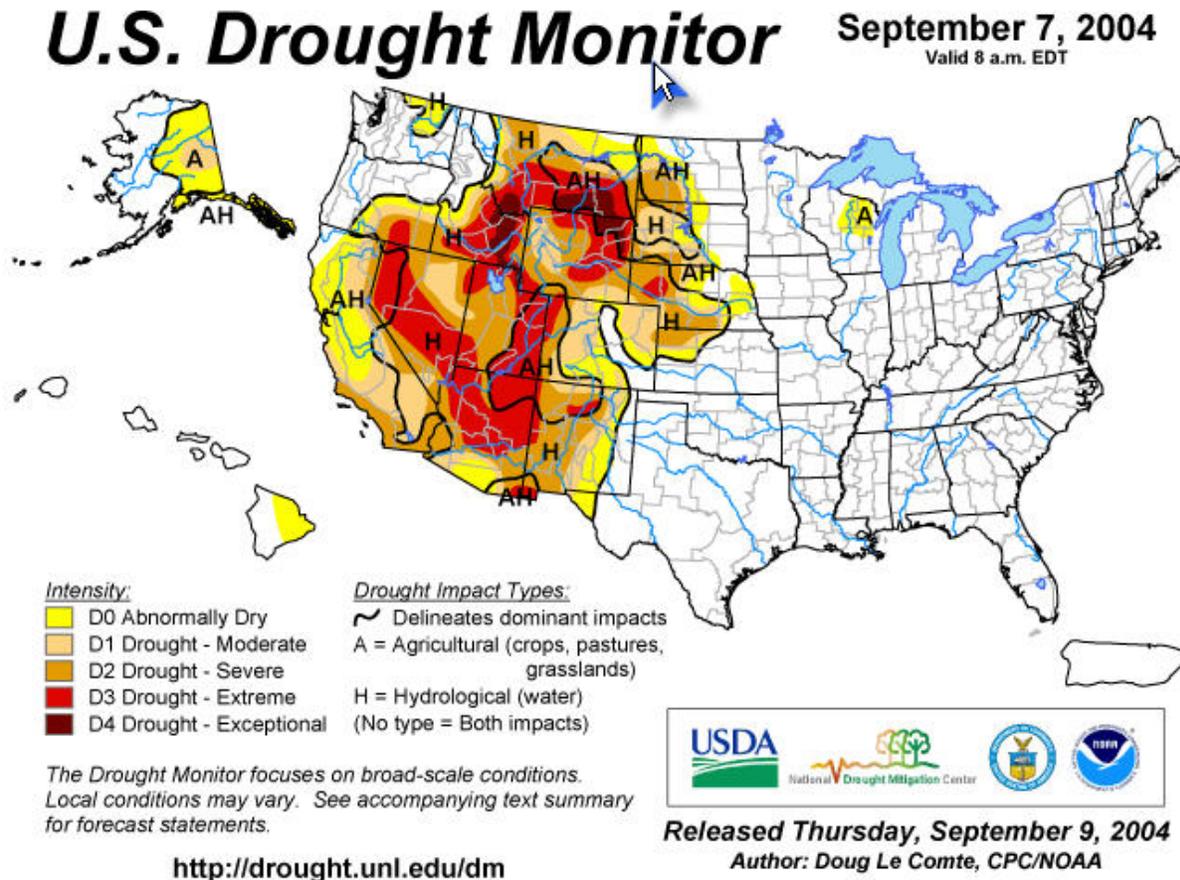
Drought

Drought was rated as a low risk by the Planning Jurisdictions

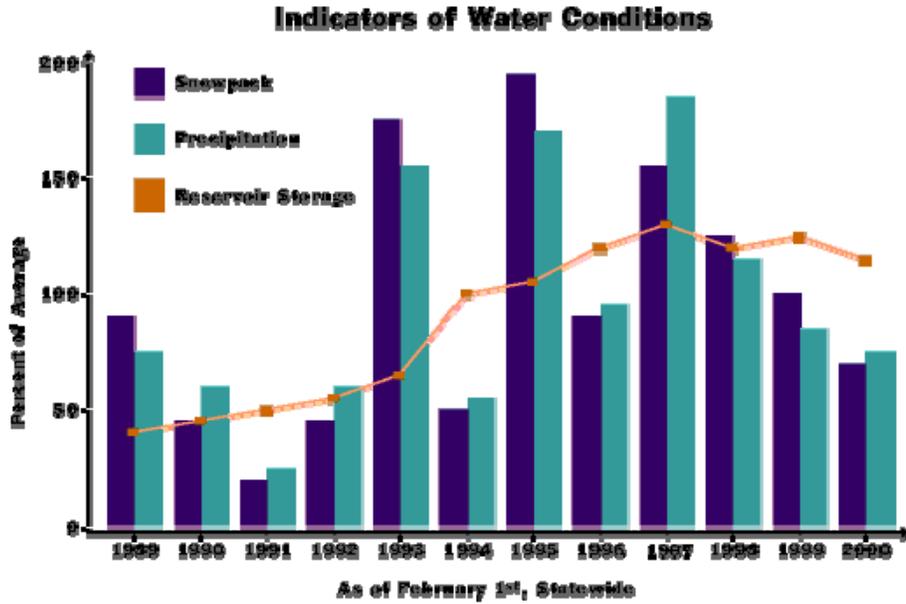
A drought is defined as "a period of abnormally dry weather, sufficiently prolonged for the lack of water to cause a serious hydrologic imbalance in the affected area." The National Weather Service does not define or declare drought; that is generally the responsibility of State and local agencies in a given geographical area. The Federal Government will define and declare drought conditions on the request of local and State officials or when the weather phenomenon falls over a region of the Country.

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.

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.



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.



Heat Wave

Heat Wave was rated as a low risk hazard by the Planning Jurisdictions

A heat wave is an elevated variation from normal high temperatures. Areas with irregular and intense variations and, that have variations of 20 degrees or more, fare worse than places where the temperature variation is more stable. A threshold for a heat wave in New York may be 93F degrees for a few days, whereas in Las Vegas or Phoenix it might be 112F. Other factors that increase the degree of risk in a heat wave are clear sunny skies rather than cloud cover, increased humidity, strong winds, lack of ventilation, dark roofs and brick facades. Statistically, 48 hours into a heat wave are when related deaths start to occur.

In order for a heat wave to be listed as the cause of death one of the following causal factors must be met: A body temperature of 105 or more, a high environmental temperature at the death scene, or decomposition seen in a body witnessed alive just before the heat wave. Many suspected heat wave deaths are attributed to other factors such as fatal heart attacks and strokes, which probably would not have occurred without the heat.

Heat waves kill more people in the United States than any other disaster. It was estimated by the University of Delaware that an average of 1,500 American city dwellers die each year due to the heat. Annual deaths from tornados, earthquakes and floods put together average fewer than 200.

Dr. Klineberg, a Sociologist at New York University, identifies the victims of heat waves to be the "the poor, the old, residents of abandoned and violent neighborhoods that live alone, lack access to air-conditioning."

Other effects of heat waves include buckled roadways, train derailments and death of livestock.

(Mitigation strategies include media warnings, lists of at-risk elderly populations, door-to-door checkups, deployment water trucks and establishment of heat command centers)

Worldwide meteorological figures also showed that, in 2001, the northern hemisphere had enjoyed its warmest ever half year, with temperatures 0.73 degrees C (1.31F) above the long term average.

A London Meteorological Office spokesman said scientists predicted that, depending on the level of pollution, global temperatures would rise between 1.4 degrees C (2.52F) and as much as 5.9 degrees C (10.62F) in the next 100 years.

The number of heat wave deaths in the region of Pico Rivera is not to be of significant disaster risk, but rather an individual medical emergency.

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. Jurisdictions conducted a capabilities assessment, reviewing existing local plans, policies, and regulations for any other capabilities relevant to hazard mitigation planning. An analysis of their capability to carry out these implementation measures with an eye toward hazard and loss prevention was conducted. The capabilities assessment required an inventory of the city's legal, administrative, fiscal and technical capacities to support hazard mitigation planning. After completion of the capabilities assessment, each jurisdiction evaluated and prioritized their proposed mitigations. The City considered the social, technical, administrative, political, legal, economic, and environmental opportunities and constraints of implementing a particular mitigation action. This step resulted in a list of acceptable and realistic actions that address the hazards identified in each jurisdiction.

A full suite of goals, objectives and action items for the City is presented in this Plan. The City then identified and prioritized actions with the highest short to medium term priorities. An implementation, schedule, funding source and coordinating individual or agency is identified for each prioritized action item.

The Planning Jurisdictions are supportive of the following hazard mitigation strategies. The City shall make every effort, given appropriate funding, to implement these strategies as conditions warrant.

Strategy Matrix

The matrix below shows the jurisdictional strategies, their priority and the hazards they address. Each strategy is detailed in the following pages: (“P” indicates the primary hazard(s) addressed and “X” indicates related hazards or hazards determined to be of equal importance.)

Strategy Priority	High Risk Priority Hazards									Moderate Risk Priority Hazards					Low Risk Priority Hazards			
	Project Number	Earthquake	Severe Wx	Transportation Loss	Utility Loss	Water/Waste Water Loss	Data/Telecom Loss	Transportation Accident	Hazmat	Dam Failure	Flood	Economic Disruption	Terrorism / WMD	Biological / Health	Civil Unrest	Wild Fire	Drought	Heat Wave
1	1	X			X	X												
	2							P										
	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	4										P							
	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	6								P									
	7	X							P		X							
	8	X					P		P		X							
	9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	11	X				X	X											
2	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	7						P											
	8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
3	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	5	X														X		
	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Priority 1 Hazard Mitigation Strategies

Project 1

Program/Project Description	Purchase backup/emergency power equipment for use at critical water system facilities.
Cost	\$ 175,000.00 per generator
Timeline/Schedule	1 – 6 years
Responsible Agency	City of Pico Rivera and the Pico Water District
Financing	Grants Capital Improvements Budget
Goal Addressed	Protect life and property,
Related Hazard	Water/Wastewater disruption Utility Loss/ Earthquake

Project 2

Program/Project Description	Study feasibility if establishing cooperative agreements with transportation agencies (MTA, Montebello Bus) to improve response to transportation-related disasters.
Cost	FTE
Timeline/Schedule	1-3 years
Responsible Agency	City of Pico Rivera/ El Rancho Unified School District
Financing	Staff time
Goal Addressed	Increase effectiveness of emergency services
Related Hazard	Transportation accidents

Project 3

City of Pico Rivera	
Program/Project Description	Purchase additional barricades, traffic cones, and other traffic control devices.
Cost	\$75,000.00
Timeline/Schedule	July 2005 start date and project to be ongoing
Responsible Agency	City of Pico Rivera
Financing	Capital Improvements Budget
Goal Addressed	Protect life and property/ reduce the impact of transportation accidents incidents in the Planning Jurisdictions
Related Hazard	All Hazard requiring evacuation, and traffic diversion and security of an area

Project 4

Program/Project Description	Purchase water pumps, sandbags, and other emergency response items.
Cost	To be determined by Planning Jurisdictions request for bid process
Timeline/Schedule	1-3 years
Responsible Agency	City of Pico Rivera, Pico Water District and the El Rancho Unified School District
Financing	Individual Jurisdictions general funds as feasible and Federal Grants as available
Goal Addressed	Protect life and property, reduce flood impact
Related Hazard	Flood

Project 5

Program/Project Description	To avoid traffic gridlock during disasters, establish several staging points for emergency response vehicles.
Cost	FTE
Timeline/Schedule	1-6 year implementation
Responsible Agency	PR, ERUSD, Fire Dept, Sheriff
Financing	Staff time
Goal Addressed	Protect life and property, enhance emergency response capabilities
Related Hazard	All Hazards

Project 6

Program/Project Description	Education and notification regarding hazardous materials stored at well sites, i.e., chlorine and/or fluoride on City sites.
Cost	FTE
Timeline/Schedule	Start November 2004; finish November 2005.
Responsible Agency	City of Pico Rivera, Pico Water Department
Financing	General Fund for Staff time
Goal Addressed	Increase public awareness reduce the impact of a hazardous materials incident
Related Hazard	Hazardous materials

Project 7

Program/Project Description	Survey all hazardous material locations within the Planning Jurisdictions impacted area
Cost	FTE
Timeline/Schedule	1-3 years
Responsible Agency	Planning Jurisdictions
Financing	Staff time
Goal Addressed	Protect life and property, Public Education and Emergency Preparedness
Related Hazard	Primary Hazard is Hazardous materials, and secondary hazards are flood and earthquake

Project 8

City of Pico Rivera/Pico Rivera Water Department	
Program/Project Description	Upgrade chlorine storage buildings at water well sites.
Cost	TBD
Timeline/Schedule	1-3 years
Responsible Agency	CPR, PWD
Financing	Capital Improvements Budget
Goal Addressed	Protect life and property
Related Hazard	Water/Wastewater disruption Hazardous Materials are primary hazards, secondary hazards would be flood and earthquake

Project 9

For All Planning Jurisdictions Program/Project Description	Study feasibility of stationing backup power equipment, e.g., generators, at all critical facilities (not including water system facilities) identified by the Pico Rivera Hazard Mitigation Planning Team.
Cost	This strategy requires and cost study by each of the individual organizations FTE
Timeline/Schedule	1-5 years
Responsible Agency	City of Pico Rivera, Pico Water Department, El Rancho School District
Financing	Staff time to do feasibility study \$25,000.00
Goal Addressed	Increase effectiveness of emergency services. Reduce the impact of all hazards.

Project 10

All Planning Jurisdictions Program/Project Description	The Planning Jurisdictions are limited in budget and ability to implement mitigation strategies. They plan to better participate in utilizing funding opportunities from outside resources such as State and Federal grants, and participating in special study zones for implementation of mitigation activities.
Cost	FTE Combined effort would cost approximately \$15,000.00
Timeline/Schedule	Implement as soon as possible in jurisdictions program tasks
Responsible Agency	City of Pico Rivera, Pico Water Department and El Rancho School District
Financing	Utilizing existing budgeted staff time to implement the program in each of the Planning Jurisdictions
Goal Addressed	Utilize all available resources to increase the impact of disasters on the Planning Jurisdictions and increase effectiveness of emergency services
Related Hazard	All Hazard

Project 11

City of Pico Rivera and Pico Water District	
Program/Project Description	Determine if existing inter-ties are sufficient to ensure that water systems can function during disasters.
Cost	FTE Ongoing Staff commitment of \$5,000.00
Timeline/Schedule	As staff available on a weekly basis
Responsible Agency	City of Pico Rivera, Pico Water Department
Financing	Water Authority Budget and City of Pico Rivera Capital Improvements Budget
Goal Addressed	Increase effectiveness of emergency services Protect life and property
Related Hazard	Water/Wastewater disruption/ Earthquake and Utility

Priority 2 Hazard Mitigation Strategies

Project 1

Planning Jurisdictions Program/Project Description	Create a GIS map of all critical facilities
Cost	\$10,000.00
Timeline/Schedule	1 to 3 Years
Responsible Agency	City of Pico Rivera, Pico Water and El Rancho School District
Financing	Contributions from Planning Jurisdictions Capital Improvements Budgets
Goal Addressed	Increase effectiveness of disaster preparedness and critical facility protection
Related Hazard	All Hazard

Project 2

Planning Jurisdictions Program/Project Description	Study the need for additional property insurance to minimize financial impact of disasters.
Cost	\$15,000.00
Timeline/Schedule	1-3 Years
Responsible Agency	City of Pico Rivera, Pico Water and El Rancho Unified School District
Financing	Jurisdictions General Fund
Goal Addressed	Protect property and critical facilities including disaster recover
Related Hazard	All

Project 3

Planning Jurisdictions Program/Project Description	Establish an ongoing Pico Rivera Mitigation Planning Team and work to include other affected agencies (County Flood Control).
Cost	\$25,000.00
Timeline/Schedule	1 to 5 years
Responsible Agency	City of Pico Rivera, Pico Water District and El Rancho Unified School District.
Financing	Jurisdictional Staff time
Goal Addressed	Monitor Mitigation Strategy implementation, provide opportunity of additional mitigation strategies to be identified and studied
Related Hazard	All

Project 4

Planning Jurisdictions Program/Project Description	Integrate the Pico Rivera Multi-Jurisdictional Local Hazard Mitigation Plan into existing regulatory documents and programs as feasible and appropriate.
Cost	FTE
Timeline/Schedule	Start November 2004; finish November 2006.
Responsible Agency	Planning Jurisdictions
Financing	Jurisdictions general budget for staff and implementation time
Goal Addressed	Reduction of the impact of hazards on the planning area
Related Hazard	All hazard

Project 5

Program/Project Description	Develop a comprehensive public education program regarding hazards, emergency response, and public participation.
Cost	[FTE]
Timeline/Schedule	Not scheduled
Responsible Agency	CPR
Financing	Grants Staff time
Goal Addressed	Increase public awareness
Related Hazard	All

Project 6

Program/Project Description	Investigate the use, during emergencies, of message signs located at Pico, Smith, and Rivera Parks.
Cost	FTE
Timeline/Schedule	November 2004
Responsible Agency	CPR
Financing	Staff time
Goal Addressed	Increase public awareness
Related Hazard	All

Project 7

Program/Project Description	Upgrade chlorine storage buildings at water well sites.
Cost	TBD
Timeline/Schedule	Not scheduled
Responsible Agency	CPR, PWD
Financing	Capital Improvements Budget
Goal Addressed	Protect life and property
Related Hazard	Water/Wastewater disruption

Project 8

Program/Project Description	Study feasibility of stationing backup power equipment, e.g., generators, at all critical facilities (not including water system facilities) identified by the Pico Rivera Hazard Mitigation Planning Team.
Cost	FTE
Timeline/Schedule	Ongoing
Responsible Agency	CPR, PWD, ERUSD
Financing	Staff time
Goal Addressed	Increase effectiveness of emergency services
Related Hazard	All

Project 9

Program/Project Description	To avoid traffic gridlock during disasters, Work with City and County staff to establish several staging points for emergency response vehicles.
Cost	FTE
Timeline/Schedule	TBD
Responsible Agency	CPR, ERUSD, Fire Dept, Sheriff
Financing	Staff time
Goal Addressed	Protect life and property
Related Hazard	All

Project 10

Program/Project Description	Study feasibility of installing traffic signals at fire stations, or purchasing "Opticon" system, that will allow traffic signal control by fire vehicles.
Cost	FTE
Timeline/Schedule	Not scheduled
Responsible Agency	City of Pico Rivera
Financing	Capital Improvements Budget
Goal Addressed	Protect life and property
Related Hazard	All

Priority 3 Hazard Mitigation Strategies

Project 1

Program/Project Description	Expand the local network of ham radio operators.
Cost	FTE
Timeline/Schedule	TBD
Responsible Agency	CPR
Financing	Staff time
Goal Addressed	Increase public awareness
Related Hazard	All Hazards

Project 2

Program/Project Description	Purchase hand pumps for use at fuel tank locations.
Cost	A cost study will need to be performed at some time in the future to determine feasibility
Timeline/Schedule	3 to 10 years as budget is available
Responsible Agency	CPR, PWD, ERUSD
Financing	Capital Improvements Budget Grants
Goal Addressed	Increase effectiveness of emergency services
Related Hazard	All

Project 3

Program/Project Description	Establish emergency purchase orders to allow for faster response to emergencies.
Cost	All jurisdictions would expect at least a \$25,000 commitment of staff time over a 5 year period.
Timeline/Schedule	Each jurisdiction intends to explore the steps needed to implement this program and continue to implement it on an ongoing basis
Responsible Agency	CPR, PWD, ERUSD
Financing	Staff time
Goal Addressed	Increase effectiveness of emergency services, identify and insure access to critical resources by having a program in place
Related Hazard	All Hazards

Project 4

Program/Project Description	Encourage citizens' groups (Homeowners Associations, Neighborhood Watch, Business Watch) to complete emergency response training.(CERT)
Cost	TBD
Timeline/Schedule	This strategy needs the cooperation and commitment of staff time from County Fire and Sheriff as well as all of the Planning Jurisdictions.
Responsible Agency	City of Pico Rivera, Pico Water, El Rancho Unified School District, Los Angeles County Fire and Sheriff
Financing	Staff time and contract service time
Goal Addressed	Increase public awareness Strengthen partnerships
Related Hazard	All

Project 5

Program/Project Description	Study feasibility of expanding recycled water infrastructure so that more recycled water can be utilized during emergencies.
Cost	Feasibility Study \$125,000.00
Timeline/Schedule	7 to 10 Years
Responsible Agency	CPR, PWD
Financing	Grants Capital Improvements Budget
Goal Addressed	Increase effectiveness of emergency services, project water supply resources
Related Hazard	Earthquake, Fire

Project 6

Program/Project Description	Study need for establishing a specialized field response team for utilization during disasters
Cost	[FTE]
Timeline/Schedule	Ongoing
Responsible Agency	CPR, PWD, ERUSD
Financing	Staff time
Goal Addressed	Increase effectiveness of emergency response
Related Hazard	All

Section 6 – Future Actions & Goals

Long-term Goals

Goals, Objectives and Actions

Listed below are the Planning Jurisdiction 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 Planning Jurisdiction's has identified a range of specific actions to achieve the long term objective and goal. The goals and objectives were developed by considering the risk assessment findings, localized hazard identification and loss/exposure estimates, and an analysis of the jurisdiction's current capabilities assessment. These preliminary goals, objectives and actions were developed to represent a vision of long-term hazard reduction or enhancement of capabilities.

In addition, Planning Jurisdiction representatives met with consultant staff and Departments to specifically discuss these hazard-related goals, objectives and actions as they related to the overall Plan Representatives of numerous Planning Jurisdictions departments were involved in hazard mitigation planning. Those Departments are listed specifically on the minutes of the meetings.

The Planning Jurisdictions have jointly 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 and support 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 Planning Jurisdiction-owned facilities from the following high risks:

- Earthquake
- Severe Weather
- Transportation Loss
- Utility Loss
- Water/Wastewater Disruption
- Data/Telecommunications Loss
- Hazardous Materials
- Transportation/Pipeline Accidents

Long Term Objectives and Actions

The Planning Jurisdictions developed the following broad list of objectives and actions to assist in the implementation of each of their identified goals. The Planning Jurisdictions 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 4 Review Codes every 3 years.

Action 5 Establish emergency review procedures for codes.

Objective 2: Facilitate consistent enforcement of general plans, zoning ordinances, and building codes.

Objective 3: Limit future development in hazardous areas

Action 6 Development should be in harmony with existing topography.

Action 7 Development patterns should respect environmental characteristics.

Action 8 Development should be limited in areas of known geologic hazards.

Action 9 Development in floodplains shall be limited to protect lives and property.

Objective 4: Address identified data limitations regarding the lack of information about new development and build-out potential in hazard areas.

Objective5: Increase public understanding, support and demand for hazard mitigation for new developments.

Action 10 Gain public acceptance for avoidance policies in high hazard areas.

Future Goals and Objectives

Goal 1: Increase public understanding and support for effective hazard mitigation.

Objective 1: Educate the public to increase awareness of hazards and opportunities for mitigation actions.

Action 1 Publicize and encourage the adoption of appropriate hazard mitigation actions.

Action 2 Provide information to the public on the Planning Jurisdictions website.

Action 3 Gain public acceptance for avoidance policies in high hazard areas.

Goal 2: Increase public understanding and support for effective hazard mitigation.

Objective 1: Educate the public to increase awareness of hazards and opportunities for mitigation actions.

Action 1 Publicize and encourage the adoption of appropriate hazard mitigation actions.

Action 2 Provide information to the public on the Planning Jurisdictions website.

Action 3 Gain public acceptance for avoidance policies in high hazard areas.

Goal 3: Enhance hazard mitigation coordination and communication with federal, state, County and local regional jurisdictions.

Objective 1 Establish and maintain closer working relationships with state agencies, county departments and local regional jurisdictions..

Action 1 Develop multi-jurisdictional/ multi-functional training and exercises to enhance hazard mitigation.

Goal 4: Enhance hazard mitigation coordination and communication with federal, state, county and local regional jurisdictions

Objective 1 Encourage other organizations to incorporate hazard mitigation activities.

Action 1 Leverage resources and expertise that will further hazard mitigation efforts.

Action 2 Update the Planning Jurisdictions multi-hazard mitigation plan on a regular basis

Action 3 Establish and maintain lasting partnerships through existing Planning Jurisdictions Organization .

Action 4 Maintain coordination, communication and cooperation with the State in administering recovery programs.

Action 5 Continue to exchange resources and work with local and regional partners.

Goal 5: Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to earthquakes.

Objective 1: Develop a comprehensive approach to reducing the possibility of damage and losses due to earthquakes.

Action 1 Maintain Building Codes to reflect current earthquake standards.

Action 2 Encourage and participate in community awareness meetings.

Action 3 Distribute printed publications to the communities concerning hazards.

Objective 2: Protect existing assets with the highest relative vulnerability to the effects of earthquakes.

Action 4 Identify hazard-prone structures as feasible

Action 5 Encourage and continue the study ground motion, landslide, and liquefaction.

Objective 3: Coordinate with and support existing efforts to mitigate earthquake hazards

Action 6 Identify projects for pre-disaster mitigation funding.

Action 7 Design and implement an ongoing public seismic risk assessment program.

Action 8 Collaborate with Federal, State, universities and local agencies' mapping efforts.

Objective 4: Address identified data limitations regarding the lack of information about the relative vulnerability of assets from earthquakes.

Action 9 Assess Planning Jurisdictions utility infrastructure with regard to earthquake risk, including public and private utilities.

Action 10 Encourage the public to prepare and maintain a 3-day preparedness kit for home and work for all hazards

Goal 6: 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 Planning Jurisdictions 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 Planning Jurisdictions.

The Disaster Mitigation Action 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 Pico Rivera will work together with the member of the Planning Jurisdictions.

Potential Funding Source: FEMA Grants/ General Funds for Planning Jurisdictions and Cities.

Implementation Timeline: 1 Year

Action Item #2: Publicize and encourage the adoption of appropriate hazard mitigation actions.

Coordinating Individual/Organization: Planning Jurisdictions

Potential Funding Source: General Fund/Federal or State grants.

Implementation Timeline: 1 - 3 years

Action Item #3: Update Building Codes to reflect current earthquake standards.

Coordinating Individual/Organization: Public Works and Building and Codes Department

Potential Funding Source: General Fund/Federal or State Grants.

Implementation Timeline: 2 - 5 years

Action Item #4: Review and compare existing flood control standards, zoning and building requirements.

Coordinating Individual/Organization: Department of Public Works (DPW)/

Potential Funding Source: General Fund/Federal or State Grants

Implementation Timeline: 1 - 3 years

Action Item #5: Encourage the public to prepare and maintain a 3-day preparedness kit for home and work.

Coordinating Individual/Organization: OEM/ Media & Public Relations/IT

Potential Funding Source: General Fund/Federal or State grants

Implementation Timeline: 1 - 3 years

Capabilities Assessment – City of Pico Rivera

The City of Pico Rivera identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment portion of the 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 and their responsibilities related to hazard mitigation planning and implementation; and (2) a list of existing planning documents and regulations related to mitigation efforts. The administrative and technical capabilities, 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	
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	N	Contract Necessary Service
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y	
Floodplain manager	N	
Surveyors	N	
Staff with education or expertise to assess the community's vulnerability to hazards	Y	
Personnel skilled in GIS and/or HAZUS	Y	
Scientists familiar with the hazards of the community	N	
Emergency manager	Y	
Grant writers	Y	

Regulatory Tools

The legal and regulatory capabilities of each jurisdiction are listed 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 ordinances, 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	
Site plan review requirements	Y	
General or comprehensive plan	Y	
A capital improvements plan	Y	
An economic development plan	Y	
An emergency response plan	Y	
A post-disaster recovery plan	Y	
A post-disaster recovery ordinance	Y	
Real estate disclosure requirements	Y	Adopted State Requirements
Habitat Management Plan	Y	
Master Drainage, Sewer, Water, & Reclaimed Water	N	However, the city has sewer plan.
Redevelopment Master Plan	Y	

Fiscal Resources

The table below shows specific financial and budgetary tools available to the jurisdictions such as community development block grants; capital improvements project funding; authority to levy taxes for specific purposes; fees for water, sewer, gas, or electric services; impact fees for homebuyers or developers for new development; ability to incur debt through general obligations bonds; and withholding spending in hazard-prone areas.

Financial Resources	Y/N	Comments
Community Development Block Grants	Y	
Capital improvements project funding	Y	
Authority to levy taxes for specific purposes	Y	
Fees for water, sewer, gas, or electric service	N	
Impact fees for homebuyers or developers for new developments/homes	N	
Incur debt through general obligation bonds	N	
Incur debt through special tax and revenue bonds	N	
Incur debt through private activity bonds	N	
Withhold spending in hazard-prone areas	N	

* Subject to grant from State
 ** Subject to voter approval

Capabilities Assessment – El Rancho Unified School District

The El Rancho Unified School District identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment portion of the mitigation plan identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments and their responsibilities 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 and 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 District. The administrative and technical capabilities, 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..

Administrative & Technical Capacity

Position	Y/N	Dept / Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Outside consultant
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Outside consultant
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	N/A	
Staff with education or expertise to assess the community's vulnerability to hazards	N/A	
Personnel skilled in GIS and/or HAZUS	N/A	
Scientists familiar with the hazards of the community	N/A	
Emergency manager	Y	District
Grant writers	Y	Use both internal expertise & outside consultants

Regulatory Tools

The legal and regulatory capabilities of El Rancho Unified School District are shown in the table below:

Regulatory Tools (ordinances, codes, plans)	Y/N	Comments
Building code	Y	Adopted
Zoning ordinance	Y	Adopted
Subdivision ordinance or regulations	N/A	
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Adopted
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N/A	
Site plan review requirements	Y	CDE & DSA
General or comprehensive plan	N	
A capital improvements plan	Y	Master Facilities Plan
An economic development plan	N/A	
An emergency response plan	Y	
A post-disaster recovery plan	Y	HMP
A post-disaster recovery ordinance	N/A	
Real estate disclosure requirements	Y	When selling property
Habitat Management Plan	Y	Adopted
Master Drainage, Sewer, Water, & Reclaimed Water	Y	Adopted
Redevelopment Master Plan	N/A	

Fiscal Resources

The table below shows specific financial and budgetary tools available to the District:

Financial Resources	Y/N	Comments
Community Development Block Grants	N	
Capital improvements project funding*	Y	State matching fund for new construction and modernization
Authority to levy taxes for specific purposes	N	
Fees for water, sewer, gas, or electric service	N	
Impact fees for homebuyers or developers for new developments/homes	Y	Developer Fees
Incur debt through general obligation bonds**	Y	
Incur debt through special tax and revenue bonds**	Y	
Incur debt through private activity bonds	N	
Withhold spending in hazard-prone areas	N	

* Subject to grant from State
 ** Subject to voter approval

Capabilities Assessment – Pico Water

Pico Water District identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment portion of the 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.

Administrative & Technical Capacity

Position	Y/N	Dept / Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Outside consultant
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Outside consultant
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	N/A	
Staff with education or expertise to assess the community's vulnerability to hazards	N/A	
Personnel skilled in GIS and/or HAZUS	N/A	
Scientists familiar with the hazards of the community	N/A	
Emergency manager	N	
Grant writers	Y	Outside consultants

Regulatory Tools

The legal and regulatory capabilities of Pico Water District are shown in the table below:

Regulatory Tools (ordinances, codes, plans)	Y/N	Comments
Building code	Y	Adopted
Zoning ordinance	Y	Adopted
Subdivision ordinance or regulations	N/A	
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	Adopted
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N/A	
Site plan review requirements	Y	
General or comprehensive plan	N	
A capital improvements plan	Y	Master Facilities Plan
An economic development plan	N/A	
An emergency response plan	Y	
A post-disaster recovery plan	Y	
A post-disaster recovery ordinance	N/A	
Real estate disclosure requirements	Y	When selling property
Habitat Management Plan	Y	
Master Drainage, Sewer, Water, & Reclaimed Water	Y	
Redevelopment Master Plan	N/A	

Fiscal Resources

The table below shows specific financial and budgetary tools available to Pico Water:

Financial Resources	Y/N	Comments
Community Development Block Grants	N	
Capital improvements project funding	Y	
Authority to levy taxes for specific purposes	N	
Fees for water, sewer, gas, or electric service	N	
Impact fees for homebuyers or developers for new developments/homes	Y	Service Improvement Fees
Incur debt through general obligation bonds	N	
Incur debt through special tax and revenue bonds	N	
Incur debt through private activity bonds	N	
Withhold spending in hazard-prone areas	N	

Section 7 – Plan Maintenance

Maintaining 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 Planning Jurisdictions will integrate public participation throughout the plan maintenance process. Finally, this section includes an explanation of how jurisdictions intend to make considerations for the mitigation strategies outlined in this plan into existing planning mechanisms.

The Planning Jurisdictions will be responsible for monitoring the plan annually for updates to jurisdictional goals, objectives, and action items. If needed, these participants will coordinate through the Planning Jurisdiction's Hazard Mitigation Planning Team to integrate these updates into the Plan. The Chairman of the Planning Jurisdictions Hazard Mitigation Planning Team will be responsible for monitoring the overall Plan for updates on an annual basis. The Chairman will reconvene the Planning Team as needed to make these updates.

The Plan will be evaluated by The City of Pico Rivera and by each participating jurisdiction at least every two years to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The Plan will also be re-evaluated by Planning Jurisdiction leads or their select jurisdictional representative based upon the initial Plan criteria used to draft goals, objectives, and action items for this Plan. Action items will be reviewed to determine their relevance to changing situations in the Planning Jurisdictions, Los Angeles County Operational, as well as changes in Stator Federal regulations and policy Planning Jurisdiction Team Members will conduction an assessment of each portion of the Plan to determine if this information should be updated or modified, given any new available data.

The Planning Jurisdictions lead team members will be the responsible group responsible group for updates to the Plan. All Planning Jurisdiction participants will be responsible to provide the Planning Team Chairperson with jurisdictional-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 Planning Jurisdictions 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 Pico Rivera, the Pico Water Department and the El Rancho Unified School District is dedicated to involving the public directly in review and updates of the Plan.

A representative from each participating jurisdiction 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 Pico Rivera website. In addition, copies of the plan will be catalogued and kept at all of the appropriate participants in the Planning Jurisdictions.

The existence and location of these copies will also be posted on the Pico Rivera website. The site will contain contact information for Planning Jurisdictions to which people can direct their comments and concerns.

All public feedback will be forwarded to the appropriate jurisdiction 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 Planning Jurisdictions. 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 lead Planning Jurisdiction 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 Terms

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

Aerosol: Fine liquid or solid particles suspended in a gas, for example, fog or smoke.

All Hazards: Refers to a policy or program that is designed to deal with a variety of natural and technological hazards.

Annex: A document that supplements the Emergency Operations Plan, which provides further planning information for a specific aspect of emergency management.

Appendix: A separate portion of the Emergency Operations Plan that contains guidance and information specific to actions required in emergency management.

Biological Agents: Living organisms or the materials derived from them that cause disease in or harm to humans, animals, or plants or cause deterioration of material. Biological agents may be used as liquid droplets, aerosols, or dry powders.

Chemical Agent: A chemical substance that is intended to kill, seriously injure, or incapacitate people through physiological effects. Generally separated by severity of effect: lethal, blister, and incapacitating.

Comprehensive Emergency Management Plan: A document required by state regulation that consists of a Basic Plan, Appendices, Supplemental Annexes, and Standard Operating Procedures for the purpose of providing effective mitigation, response to and recovery from disasters.

Consequence Management: Measures to protect public health and safety, restore essential government services, and provide emergency relief to governments, businesses, and individuals affected by the consequences of terrorism. State and local governments exercise primary authority to respond to the consequences of terrorism. (Source: FRP Terrorism Incident Annex, page TI-2, April 1999). The Federal Emergency Management Agency (FEMA) has been designated the Lead Federal Agency (LFA) for consequence management to ensure that the Federal Response Plan is adequate to respond to terrorism. Additionally, FEMA supports the Federal Bureau of Investigation (FBI) in crisis management.

Continuity of Government: Includes measures to – ensure continued leadership and preservation of vital records, thereby maintaining a viable system of government supported by law; establish emergency authorities legally vested in government leaders so that they have prescribed powers to act; ensure survivability of mechanisms and systems for direction and control so that actions directed by leaders can be communicated and coordinated; sustain essential emergency services and resources so that critical response and recovery actions can achieve widest possible implementation.

Crisis Management: This is the law enforcement aspect of an incident that involves measures to identify, acquire, and plan the resources needed to anticipate, prevent, and/or resolve a threat of terrorism. The FBI is the LFA for crisis management for such an incident. (Source: FBI) During crisis management, the FBI coordinates closely with local law enforcement authorities to provide successful law enforcement resolution to the incident. The FBI also coordinates with other Federal authorities, including FEMA. (Source: FRP Terrorism Incident Annex, April 1999)

Damage Assessment: The appraisal or determination of the actual damage resulting from a disaster.

Decontamination: The process of making people, objects, or areas safe by absorbing, destroying, neutralizing, making harmless, or removing the HazMat.

Disaster: The occurrence or imminent threat of widespread or severe damage, injury or loss of life or property resulting from any natural or manmade cause including fire, flood, earthquake, air contamination, blight, drought, infestation, explosion, riot, hostile military or paramilitary action, other public calamity requiring emergency action.

Disaster Assistance Center: A location established in a disaster area that houses all federal, state, and local agencies that deal directly with the needs of the individual victim. DACs are established only after a Presidential Declaration.

Disaster Declaration: A document executed by an elected government for the purpose of obtaining assistance from a higher level of government.

Disaster Service Workers: All public employees in California are subject to such emergency or disaster activities as may be assigned by their supervisors or by law.

Drill: A supervised instruction period aimed at testing, developing, and maintaining skills in a particular operation. A drill is often a component of an exercise.

Drop Cover, and Hold: Shelter position under tables or desks or other protected places away from overhead fixtures, windows, high cabinets, and bookcases, for immediate individual protection during an emergency.

Emergency: An event, the effects of which cause loss of life, human suffering, property damage (both public and private), and severe economic and social disruption.

Emergency Alert System: A program of the Federal Communications Commission (FCC) to coordinate the dissemination of emergency information via commercial broadcasters.

Emergency Coordinator: A position called for in the Emergency Organization to carry out emergency management functions on a day-to-day basis at the local level.

Emergency Manager: A position called for in the Emergency Organization to oversee the implementation of the City of Hayward Comprehensive Emergency Management Plan at the local level.

Emergency Operations Center: A centralized location where individuals responsible for responding to a large scale emergency can have immediate communication with each other and with City management for the purpose of enhancing coordination in exercising direction and control of emergency response and recovery efforts.

Emergency Organization: Organization to direct and control operations of the City during a period of emergency with assigned responsibilities and tasks for planning, response, and recovery in emergency situations.

Emergency Powers: Special authority granted to a chief local official during times of emergency. The State delegates emergency powers to designated local officials through an executive order.

Federal Response Plan (FRP): The FRP establishes a process and structure for the systematic, coordinated, and effective delivery of Federal assistance to address the consequences of any major disaster or emergency declared under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended (42 U.S. Code [USC], et seq.). The FRP Terrorism Incident Annex defines the organizational structures used to coordinate crisis management with consequence management. (Source: FRP Terrorism Incident Annex, April 1999)

Lead Agency: The Federal department or agency assigned lead responsibility under U.S. law to manage and coordinate the Federal response in a specific functional area. The FBI is the lead agency for crisis management and FEMA is the lead agency for consequence management. Lead agencies support the overall Lead Federal Agency (LFA) during all phases of the response.

Lead Federal Agency (LFA): The agency designated by the President to lead and coordinate the overall Federal response is referred to as the LFA and is determined by the type of emergency. In general, an LFA establishes operational structures and procedures to assemble and work with agencies providing direct support to the LFA in order to provide an initial assessment of the situation, develop an action plan, monitor and update operational priorities, and ensure each agency exercises its concurrent and distinct authorities under U.S. law and supports the LFA in carrying out the President's relevant policy. Specific responsibilities of an LFA vary according to the agency's unique statutory authorities.

Level I Emergency: Minor to moderate emergency, such as major power outage, bomb threat, air pollution alert, isolated fire, or minor earthquake (no injuries or significant damage).

Level II Emergency: Moderate to severe emergency, such as major fire, moderate earthquake, bomb explosion (with injuries and/or structural damage).

Level III Emergency: Major emergency or disaster, such as a major earthquake or nuclear explosion.

Local Emergency Responder: Safety services provided by outside agencies, such as police, fire, medical or rescue services.

Mitigation: Those actions (including threat and vulnerability assessments) taken to reduce the exposure to and detrimental effects of a WMD incident.

Mitigation Phase: Phase of emergency management for site-specific action to minimize hazards and reduce the potential for injury or damage in an emergency.

Nonpersistent Agent: An agent that, upon release, loses its ability to cause casualties after 10 to 15 minutes. It has a high evaporation rate, is lighter than air, and will disperse rapidly. It is considered to be a short-term hazard; however, in small, unventilated areas, the agent will be more persistent.

Persistent Agent: An agent that, upon release, retains its casualty-producing effects for an extended period of time, usually anywhere from 30 minutes to several days. A persistent agent usually has a low evaporation rate and its vapor is heavier than air; therefore, its vapor cloud tends to hug the ground. It is considered to be a long-term hazard. Although inhalation hazards are still a concern, extreme caution should be taken to avoid skin contact as well.

Plume: Airborne material spreading from a particular source; the dispersal of particles, gases, vapors, and aerosols into the atmosphere.

Preparation (Preparedness) Phase: Phase of emergency management for employee in-service training in emergency responsibilities, such as prevention of injuries and property damage, first-aid and other response and rescue operations, and for acquisition of adequate supplies and equipment required to respond to an emergency.

Radiation: High-energy particles or gamma rays that are emitted by an atom as the substance undergoes radioactive decay. Particles can be either charged alpha or beta particles or neutral neutron or gamma rays.

Recovery Phase: Phase of emergency management for the initiation of short-range and long-range recovery plans at each effected site to return to normal operations following an emergency.

Response Phase: Phase of emergency management in which all employees take appropriate steps in an emergency situation to put the emergency plan into action.

Terrorism: The unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Domestic terrorism involves groups or individuals who are based and operate entirely within the United States and U.S. territories without foreign direction and whose acts are directed at elements of the U.S. government or population.

Toxicity: A measure of the harmful effects produced by a given amount of a toxin on a living organism.

Weapons-Grade Material: Nuclear material considered most suitable for a nuclear weapon. It usually connotes uranium enriched to above 90 percent uranium-235 or plutonium with greater than about 90 percent plutonium-239.

Weapons of Mass Destruction: Any explosive, incendiary, or poison gas, bomb, grenade, rocket having a propellant charge of more than 4 ounces, or a missile having an explosive incendiary charge of more than 0.25 ounce, or mine or device similar to the above; poison gas; weapon involving a disease organism; or weapon that is designed to release radiation or radioactivity at a level dangerous to human life. (Source: 18 USC 2332a as referenced in 18 USC 921)

Acronyms

<u>AFB</u>	Air Force Base
<u>AMS</u>	Aerial Measuring System
<u>ANSIR</u>	Awareness of National Security Issues and Response Program
<u>ARAC</u>	Atmospheric Release Advisory Capability
<u>ARG</u>	Accident Response Group
<u>ARS</u>	Agriculture/Research Service
<u>ATC</u>	Air Traffic Control
<u>ATSD(CS)</u>	Assistant to the Secretary of Defense for Civil Support
<u>BDC</u>	Bomb Data Center
<u>CBIAC</u>	Chemical and Biological Defense Information and Analysis Center
<u>CBRNE</u>	Chemical, Biological, Radiological, Nuclear Material, or High-Yield Explosive
<u>CDC</u>	Centers for Disease Control and Prevention
<u>CDRG</u>	Catastrophic Disaster Response Group
<u>CEPPO</u>	Chemical Emergency Preparedness and Prevention Office
<u>CERCLA</u>	Comprehensive Environmental Response, Compensation, and Liability Act
<u>CHEMTREC</u>	Chemical Transportation Emergency Center
<u>CHPPM</u>	Center for Health Promotion and Preventive Medicine
<u>CIRG</u>	Crisis Incident Response Group
<u>CJCS</u>	Chairman of the Joint Chiefs of Staff
<u>CM</u>	Consequence Management
<u>CMU</u>	Crisis Management Unit (CIRG)
<u>CRU</u>	Crisis Response Unit
<u>CSREES</u>	Cooperative State Research, Education and Extension Service
<u>CST</u>	Civil Support Teams

<u>CW/CBD</u>	Chemical Warfare/Contraband Detection
<u>DAC</u>	Disaster Assistance Center
<u>DEST</u>	Domestic Emergency Support Team
<u>DFO</u>	Disaster Field Office
<u>DMAT</u>	Disaster Medical Assistance Team
<u>DMCR</u>	Disaster Management Central Resource
<u>DMORT</u>	Disaster Mortuary Operational Response Team
<u>DoD</u>	Department of Defense
<u>DOE</u>	Department of Energy
<u>DOJ</u>	Department of Justice
<u>DPP</u>	Domestic Preparedness Program
<u>DSR</u>	Damage Survey Report
<u>DTCTPS</u>	Domestic Terrorism/Counter Terrorism Planning Section (FBI HQ)
<u>DTIC</u>	Defense Technical Information Center
<u>EAS</u>	Emergency Alert System
<u>EM</u>	Emergency Management
<u>EMI</u>	Emergency Management Institute
<u>EMS</u>	Emergency Medical Services
<u>EOC</u>	Emergency Operations Center
<u>EOP</u>	Emergency Operations Plan
<u>EPA</u>	Environmental Protection Agency
<u>EPCRA</u>	Emergency Planning and Community Right-to Know Act
<u>ERT</u>	Emergency Response Team (FBI)
<u>ERT-A</u>	Emergency Response Team – Advance Element
<u>ERTU</u>	Evidence Response Team Unit

<u>ESF</u>	Emergency Support Function
<u>EST</u>	Emergency Support Team
<u>EU</u>	Explosives Unit
<u>FBI</u>	Federal Bureau of Investigation
<u>FEMA</u>	Federal Emergency Management Agency
<u>FEST</u>	Foreign Emergency Support Team
<u>FNS</u>	Food and Nutrition Service
<u>FRERP</u>	Federal Radiological Emergency Response Plan
<u>FRMAC</u>	Federal Radiological Monitoring and Assessment Center
<u>FRP</u>	Federal Response Plan
<u>FS</u>	Forest Service
<u>HazMat</u>	Hazardous Materials
<u>HHS</u>	Department of Health and Human Services
<u>HMRU</u>	Hazardous Materials Response Unit
<u>HQ</u>	Headquarters
<u>HRT</u>	Hostage Rescue Team (CIRG)
<u>HTIS</u>	Hazardous Technical Information Services (DoD)
<u>IC</u>	Incident Commander
<u>ICS</u>	Incident Command System
<u>IND</u>	Improvised Nuclear Device
<u>JIC</u>	Joint Information Center
<u>JOC</u>	Joint Operations Center
<u>JTF-CS</u>	Joint Task Force for Civil Support

<u>LEPC</u>	Local Emergency Planning Committee
<u>LFA</u>	Lead Federal Agency
<u>MEDCOM</u>	Medical Command
<u>MMRS</u>	Metropolitan Medical Response System
<u>MOA</u>	Memorandum of Agreement
<u>MSCA</u>	Military Support to Civil Authorities
<u>NAP</u>	Nuclear Assessment Program
<u>NBC</u>	Nuclear, Biological, and Chemical
<u>NCP</u>	National Oil and Hazardous Substances Pollution Contingency Plan
<u>NDMS</u>	National Disaster Medical System
<u>NDPO</u>	National Domestic Preparedness Office
<u>NEST</u>	Nuclear Emergency Search Team
<u>NETC</u>	National Emergency Training Center
<u>NFA</u>	National Fire Academy
<u>NMRT</u>	National Medical Response Team
<u>NRC</u>	Nuclear Regulatory Commission
<u>NRT</u>	National Response Team
<u>NSC</u>	National Security Council
<u>NTIS</u>	National Technical Information Service
<u>OEP</u>	Office of Emergency Preparedness
<u>OFCM</u>	Office of the Federal Coordinator for Meteorology
<u>OIG</u>	Office of the Inspector General (USDA)
<u>OSC</u>	On-Scene Commander

<u>OSLDPS</u>	Office for State and Local Domestic Preparedness Support
<u>PDD</u>	residential Decision Directive
<u>PHS</u>	Public Health Service
<u>POC</u>	Point of Contact
<u>PT</u>	Preparedness, Training, and Exercises Directorate (FEMA)
<u>R&D</u>	Research and Development
<u>RAP</u>	Radiological Assistance Program
<u>RCRA</u>	Research Conservation and Recovery Act
<u>RDD</u>	Radiological Dispersal Device
<u>REAC/TS</u>	Radiation Emergency Assistance Center/Training Site
<u>ROC</u>	Regional Operations Center
<u>RRIS</u>	Rapid Response Information System (FEMA)
<u>RRT</u>	Regional Response Team
<u>SAC</u>	Special Agent in Charge (FBI)
<u>SARA</u>	Superfund Amendments and Reauthorization Act
<u>SBCCOM</u>	Soldier and Biological Chemical Command (U.S. Army)
<u>SCBA</u>	Self-Contained Breathing Apparatus
<u>SEB</u>	State Emergency Board
<u>SERC</u>	State Emergency Response Commission
<u>SIOC</u>	Strategic Information and Operations Center (FBI HQ)
<u>SLG</u>	State and Local Guide
<u>TERC</u>	Tribal Emergency Response Commission
<u>TIP</u>	Terrorist Incident Plan

TRIS Toxic Release Inventory System

UC Unified Command

UCS Unified Command System

USC U.S. Code

USDA U.S. Department of Agriculture

USFA U.S. Fire Administration

VA Department of Veterans Affairs

WMD Weapons of Mass Destruction

WMD-CST WMD Civil Support Team

Appendix A – Process Documentation

Steering Committee Meeting Minutes

Meeting 1

March 29, 2004

Meeting Called to Order

First meeting of the City of Pico Rivera Multi-Jurisdictional Hazard Mitigation Planning Team called to order at 1:40 PM in the City Hall Council Chamber. The multi-jurisdictions are City of Pico Rivera, Pico Water District, and El Rancho Unified School District.

Members Present

Ceci Cheng	City Administrative Analyst, Chairperson
Chris Schaefer	City Director of Administrative Services, Alternate
Scott Wasserman	City Parks and Recreation, Primary
Adrian H. Diaz	City Water Division, Primary
Tina Hansen	City Parks and Recreation, Alternate
Michelle Ramirez	City Housing Department, Primary
Bob Ridley	City Finance Department, Alternate
Bill Shannon	City Housing Department, Alternate
Michael Moore	City Public Works, Co-Chairperson
Michael Gersch	City Administrative Services, Primary
Yolanda R. Serna	City Finance Department, Primary
James Riker	City Community Development, Primary
Marco Cuevas	City Community Development, Alternate
Raymond Chavez	City Administration, Primary
Felix Montoya	City Public Works, Alternate
Estella Saucedo	City Administration, Alternate
Maria Carrillo	City Public Works, Alternate
Jesse Barreras	Pico Water District
Joe D. Basulto	Pico Water District
Carlos Jimenez	El Rancho Unified School District
Jan Rogala	Dimensions, Consultant
Rich Rogala	Dimensions, Consultant
Theresa Hayes	Dimensions, Consultant

DMA 2000 Plan Overview

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

New Business

The group elected to call itself the Pico Rivera Hazard Mitigation Planning Team. Ceci Cheng was elected chair and Mike Moore co-chair of the Pico Rivera Hazard Mitigation Planning Team. The team agreed to meet second Tuesday at 1:30.

The team agreed that each jurisdiction will have different mitigation strategies. A jurisdiction who cannot agree on strategies or if the entire membership cannot come to a consensus, the other jurisdictions will move forward.

Jan discussed the differences between a natural versus all-hazard mitigation plan. The team agreed on an all-hazard plan.

The City of Pico Rivera is active in community development and goal setting and has been for several years. El Rancho School District has a Master Plan.

Jan recommended that the Planning Team form an Executive Group to brief and update the City of Pico Rivera's City Council.

The team is an open group. The three jurisdictions can invite their stakeholders to participate in the planning team. The stakeholders are an important part of the process and their input is valuable.

Proposed and adopted Hazard Mitigation Planning Team by Laws. They are:

1. The PICO RIVERA Hazard Mitigation Planning Team is a multi-jurisdictional team represented by members from the City of Pico Rivera, the El Rancho Unified School District, and the Pico Water District.
2. The PICO RIVERA 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 PICO RIVERA Hazard Mitigation Planning Team agree to meet monthly to identify hazard priorities and review, identify and implement PICO RIVERA hazard mitigation strategy recommendations.
4. Any single Hazard Mitigation Planning Team member may request, at a scheduled meeting of the PICO RIVERA Hazard Mitigation Planning Team, an adoption of, or amendment to any part of the plan or process.
5. The PICO RIVERA Hazard Mitigation Planning Team was organized in March 2004, as reflected by the minutes of that meeting, and agreed to meet monthly to identify hazard vulnerabilities and feasible hazard mitigation strategy recommendations.
6. The PICO RIVERA 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 PICO RIVERA 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*

Proposed and adopted Hazard Mitigation Planning Tasks. They are:

1. Coordinate multi-hazard mitigation planning tasks and activities with the represented jurisdictions' staff and departments to develop a multi-hazards disaster mitigation plan and support the PICO RIVERA Hazard Mitigation Planning Team's co-chairs oversight of the planning process.

2. Assist in carrying out the goals and objectives of the PICO RIVERA Multi-Jurisdictional 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 Pico Rivera, the El Rancho Unified School District, and the Pico Water District 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 PICO RIVERA 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

The City of Pico Rivera and El Rancho Unified School District have mission statements. They will bring the consultant a copy at the next meeting.

Proposed and adopted Hazard Mitigation Planning Goals. They are:

- Support the priorities of each jurisdiction; 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 and its agencies and/or organizations

- Provide for an effective public awareness program for natural and technological hazards present in the represented jurisdictions.
- Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to each jurisdiction.
- Promote the recognition of the real value of hazard mitigation to public facilities, public safety and welfare of all citizens of the respective jurisdiction.
- Support the mitigation efforts of local governments, private citizens, non-profit organizations and private businesses throughout.

Proposed and adopted Hazard Mitigation Planning Objectives. They are:

- 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 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 Departments, Organizations and Agencies that have an interest in mitigation of specific hazards. *(to be revisited at next meeting)*
- Develop a standard mitigation program utilizing authorities, policies and programs of each jurisdiction.
- Organize, train and maintain an effective and ongoing PICO RIVERA Hazard Mitigation Planning Team that will facilitate implementation of the PICO RIVERA Multi-jurisdictional 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 each jurisdiction's administration for the PICO RIVERA Multi-jurisdictional 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.
- Support 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.

Jan reiterated that these items can be revisited at any time and added too, edited or changed.

Hazard Risk Analysis Rating Form

The team was given a hazard risk rating matrix for developing stakeholder opinions. Members will fill it out and give to Ceci by April 2, 2004.

Mitigation Program and Projects Form

A mitigation strategy form was given to the team to review. Members were asked to review and adopt the form to list past, present and future mitigation strategy projects.

Other Business

None

Results of City Tour

Chris Schaefer and Ceci Cheng took Jan Rogala, Rich Rogala and Theresa Hayes on 1 ½ hour tour through the City of Pico Rivera. The tour covered schools, water stations, greenways, recreation areas and parks, industry, critical facilities, transportation routes, and private businesses.

Adjourned at 3:30PM

Meeting 2

April 12, 2004

Meeting Called to Order

Second meeting of the City of Pico Rivera Hazard Mitigation Planning Team called to order at 2:12 PM in the Community Room at the Parks & Recreation building, 6767 Passons Boulevard. Absent from the meeting were El Rancho Unified School District and Pico Rivera Water District.

Members Present

Ceci Cheng	Administrative Services
Tina Hansen	Parks & Recreation
Michael Moore	Public Works
Raymond Chavez	Administration
Michael Gersch	Administrative Services
Adrian Diaz	Public Work-Water
Yolanda Serna	Finance
James Riker	Community Development
Jan Rogala	Dimensions, Consultant
Theresa Hayes	Dimensions, Consultant

Consideration of minutes: March 29, 2004 meeting minutes were review and adopted by the team.

Old Business

The team reviewed and adopted the Pico Rivera Hazard Mitigation Matrix Results. The team rated each disaster risk into High, Moderate or Low.

High

Earthquake
Flood
Severe Weather
Transportation
Utility Loss
Biological/Health/Agriculture
Water/Wastewater Disruption
Transportation Accidents/
Pandemic Diseases

Moderate

Explosions
Dam Failure
Economic Disruption
Weapons of Mass Destruction/
Terrorism
Winds/other then Severe Weather
Special Events

Low

Radiological Incidences
Sink Holes
Waste
Wild land/Urban Fire
Substations

Drought will be rated Moderate to Low. The team will revisited drought at the next meeting. Jan reiterated to the team that the ratings can be changed at any time.

The team discussed and commented on the following risks:

- Transportation: The team will consider how the city would function or operate its day to day business if there were a disruption in travel.

- Water: loss of water, contamination of water source, break in their system
- Railroad accident or incident

- Dams: Federal government increased density of dam walls; dam failure would be caused by an earthquake or flood event.

The team commented on historic events and risk research.

- Special Events: Sports Arena has concerts of several thousand people, and the annual California Days.
- Fire: water shortage due to a power outage, there are no above ground water supply or gravity flow water systems. Pico Rivera Water District serves one third of the 5600 citizens. The Water District provides water for fire protect and city hall. There is a back up generator although it is operated manually. It takes approximately 2 hours before water is available for use.
- Power outages: There have not been any black outs. The city has a 4 part grid system. All systems have not gone out at one time. The city has gone to generator power for power outages. Southern California Edison Company owns and operates substations in the City of Pico Rivera.
- Water systems: The pipe systems have been upgraded. A fluorine system has been added to the potable water supply. The Pico Rivera Public Works Water department is recoating over lead based paints in the water tanks. Reservoirs # 1 and # 3 have been upgraded and are 80% new in the last 4 years. The pumps have been replaced with variable speed drive. Three wells have been rehabilitated within the last 5 years. Eighty percent of the pipes systems have been replaced in the last 15 years.
- Telecommunications: The Los Angeles County Sheriff's substation in Pico Rivera operates a 911 dispatch center. The dispatch center was recently remodeled. It cost the City ten thousand dollars to relocate the dispatch center for the remodeling process.
- The Los Angeles County Fire Department's emergency dispatches through the Los Angeles Sheriff's 911 center. A gas driven power generator was purchased for a back up power source.
- Heat Stroke: No history

The team formed an Executive Group to over see the process and communication with the City of Pico Rivera's City Manager and City Council. The group will include Ceci Cheng, Michael Moore, Chris Schaefer, and Bill Shannon.

New Business

The team addressed the need for sub-committees. It was decided that sub-committees were necessary for the following entities.

- Pico Water District
- El Rancho Unified School District
- Los Angeles Fire Department
- Los Angeles Sheriff's Department
- Private business groups

A letter will be drafted from the City of Pico Rivera to send to the stakeholders. The letter will be sent to Los Angeles County Sheriff's Department, Los Angeles County Fire Department, Los Angeles County Public Works, and The Army Corp of Engineers.

The City of Pico Rivera has provided the City's General Plan, Housing Element, and the Property Schedule Asset List. The property asset list will be distributed by Michael Moore to the team

members for review. The team members will identify and label a "c" next to each facility which is critical to the City of Pico Rivera's infrastructure and economy.

Theresa will contact Pico Rivera Water District and El Rancho Unified School District for their respective facility's asset lists.

The team reviewed and made suggestions for possible mitigation strategies.

- The City of Pico Rivera Public Works Department water division would like to convert their manual generator back up system to an automated system. The current emergency plan requires four city employees to be on call 24 hours to active the manual system. The manual system requires 2 hours to become operational which leaves the City at risk for fire response.
- The City of Pico Rivera's water system is at risk for contamination from the Whittier Narrows Superfund Site. Pico Rivera has not detected any contamination levels in the last 10 years. The Plume is moving towards the City of Pico Rivera. There are 30 companies responsible for the clean up. The clean up is monitored by the United States Environmental Protection Agency.

Other Business

None

Adjourned at 3:20 PM

Meeting 3

May 10, 2004 Pico Rivera Hazard Mitigation Planning Team

Called to Order The meeting was called to order at 1:30 PM. Attendees introduced themselves.

Next Meetings June 14 in Council Chambers. All the rest will be in the Community Center from 1:30 to 2:30.

Consideration of Minutes from April 12 meeting Jan asked everyone to revisit the hazards as prioritized. A question was raised regarding the toxic plume issues in the 2 rivers bounding the city. A discussion ensued. The membership elected to accept the minutes with the changes noted on the master copy.

OLD BUSINESS CONTACT FOR OUTSIDE AGENCIES

A generic letter of solicitation of HM information was distributed to the membership. Jan recommended that a similar letter be sent to neighboring communities and stake holders in the HM program at Pico Rivera.

Jan suggested that the County Fire Dept and Sheriff's Dept be considered stake holders in the process. She indicated that the County Sheriff's Dept elevated Civil Unrest to a high risk with regard to the County HM Plan. Pico Rivera, however may consider not doing so based on the history of the area.

El Rancho School District also needs to identify other agencies, neighboring communities and stake holders in the process. Security is internal as well as some contracted with the Sheriff's Dept.

LACO DPW has a project that runs through the city namely the flood control project.

UP and BN railroad will be contacted by Michael. Also there was some discussion about the grade separation project. UP wants to add a third track to the existing two. As part of that, they will need to expand bridges in the city. The costs of these projects (grade separation) have gone up considerably over the last several years and the challenge is to identify the funding to complete these projects. Jan asked for a more specific description of the projects and any other demographic information. Michael said that there is also talk about putting in a 4th track in 15 years and the current designs of the bridges do not allow for that much expansion. We also need to know what kind of cargo is being transported through the city.

CRITICAL FACILITIES

Water District – Jan requested the following data: System description, assets and value of assets. Risk susceptibility. Any mitigation that has been implemented or is planned to be implemented. El Rancho School District data required – need list of facilities, square footage, replacement value. Listing of critical facilities. Need to look at un-owned critical facilities like LACOE, SoCalEdison, and transportation providers.

Jan explained to the whole group about what criteria may constitute a critical facility or critical service. Each jurisdiction needs to look internally and identify those services and facilities that are critical to maintain operations on a day to day basis.

Jan recommended that each jurisdiction appoint a critical facility identification sub-committee and brain storm these issues based on the criteria discussed.

The definition of critical facilities must be determined by each jurisdiction.

Each jurisdiction needs to provide a full list of assets with replacement values for the risk analysis. Michael said that any jurisdiction that has information to pass on to the consultants, please give it to him and he will send it all collectively. The consultant's local address is Dimensions Unlimited, Inc, 9059 Fairview Ave, San Gabriel, CA 91775.

HAZARD MITIGATION STRATEGIES

Jan discussed what these are. Some examples revolve around daily maintenance items, retrofitting, stabilizing, etc. Jan explained the relationship of mitigation strategies to future grant applications and money issues.

Water Department backup generators are an issue discussed at the last meeting. The Water members want to pursue this issue and will provide specifications, quantities and costs for what they want. The city hall also needs a new generator to maintain power for their IT system. Jan recommended that as a HM Strategy. The generator that powers the EOC in Parks & Rec may need updating also.

The school district has a county radio communications system. Also an area to look into for HM strategies is emergency generators for schools. Schools have a 7 day food supply and emergency supplies.

Jan solicited any and all strategy information. Either e-mail, postal or other means, but we need that information for the plan.

WHITTIER NARROWS SUPERFUND SITE POTENTIAL CONTAMINANTS

Michael said he has information regarding this. The cleanup is going on right now. There is a 10 year project to clean wells by extracting water from the wells, treating it and then selling it back to a user. The plume keeps moving and the superfund project moves with it and cleans the contaminated water. Jan said that if anyone or the coalition has any recommendations or concerns regarding this issue (South East Water Coalition), they need to be listed in the plan as strategies. Jan said that we would take it in any kind of detail they would want to give us (executive summaries, summaries). The interconnection between the city and Pico Water District was unable to be funded and could be considered as a future strategy.

A look at the risk prioritization listing revealed that hazardous materials are not listed. Jan suggested making it a subset of water/waste water disruption. As it stands the city wells are below the MCL (Maximum Contaminant Level). If the MCL is exceeded, the city would have to purchase imported water and put equipment at each site to monitor and treat. The chemical is TCS and PCE and is related to aerospace manufacturing.

NEW BUSINESS STAKEHOLDER EXPECTATIONS

Description of services in disaster conditions. Need to look at the differences of emergency response during a disaster.

General information may include:

- Disaster differences
- Critical facilities
- Description of services

Jan will summarize and pass them on to Michael with any further questions. Some state highway contracts are being reduced. Some county services are contracted. Santa Fe Springs regulates the cities traffic signals in several cities. Trash collection and street sweeping are contracted

services. Need to determine from Public Health how long trash collection could be curtailed before it becomes a health hazard.

There will soon be a new local access cable channel available for the city. Jan suggested that this might be used for community input.

A discussion about the fire suppression system in City Hall (or lack thereof) and the vulnerability of permits and important planning documentation ensued. A strategy for protecting those documents. School district suggested that they do use Red Cross and County Health but they use school district facilities. Jan recommended that any information that the Red Cross has would be valuable input to the plan.

Jan suggested that any doctors offices and local urgent care clinics may become critical to the city in epidemics and other

PUBLIC INPUT QUESTIONNAIRE

Jan introduced the questionnaire as a tool for soliciting public input and meeting some of the requirement for doing so in the law. Jan suggested that the membership take a look at the questionnaire and make suggestions on additions, deletions, edits etc.

There was also a suggestion to make it multi-lingual before distribution. If the questionnaire could be cut down it could be published on a legal size paper with English on the front and Spanish on the back.

For the school district – we could put a box on it that indicates whether or not the household has a student in the school district.

Members were asked to get the edited questionnaires back to Michael by May 20 so a finished document can be discussed at the next team meeting.

A suggestion was made to add the questionnaire to the consumer confidence report which is going to be distributed by the water department in July. Jan said that the more times you get this out, the more credit you get for public outreach. The school district would participate by offering a place for people to drop off the finished questionnaires. Also there was a suggestion to offer an incentive prize(s) for participation.

MEETING ADJOURNED Meeting adjourned at 3:40 PM.

Meeting 4

June 14, 2004
Pico Rivera Hazard Mitigation Planning Team

Meeting Called to Order

The meeting of the City of Pico Rivera Hazard Mitigation Planning Team called to order at 1:35 PM in the City Council Room, 6615 Passons Boulevard.

Introductions

Members Present

Michael Moore	Public Works	801-4420	mmoore@pico-rivera.org
Raymond Chavez	Administration	801-4217	rchavez@pico-rivera.org
Michael Gersch	Administrative Services	801-4399	mgersch@pico-rivera.org
Adrian Diaz	Public Work-Water	801-4462	adiaz@pico-rivera.org
Yolanda Serna	Finance	801-4311	yserna@pico-rivera.org
Don Griffiths	LACO Fire Dept. FS 103	942-1015	dgriffit@lacofd.org
Scott Wasserman	City of Pico Rivera	801-4430	swasserman@picorevera.org
Sam Serrano	El Rancho USD	801-5274	
Carlos Jimenez	El Rancho USD	801-5274	cjimenez@erUSD.k12.ca.us
Michelle Ramirez	City of Pico Rivera	801-4349	mramirez@pico-rivera.org
Marco Cuevas	City of Pico Rivera	801-4342	mcuevas@pico-rivera.org
Joe Basulto	Pico Water District	692-3756	
Dan Ertel	LACO Fire Department	323.721-3216	dertel@lacofd.org
Jan Rogala	Dimensions, Consultant	916.712-1697	janrogala@aol.com
Theresa Hayes	Dimensions, Consultant	626.286-8305	theresa@dimensionsui.com

Consideration of minutes: May 10, 2004 meeting minutes were review and adopted by the team.

Old Business

Stakeholders

Don Griffiths and Dan Ertel representing the Los Angeles County Fire department were welcomed to the committee meeting. They were asked to give their recommendations for mitigating disaster risks pertaining to the City of Pico Rivera. They agreed to review the high risk disasters.

The neighboring cities were invited. None attended the meeting.

Critical Facilities

The Critical Facilities sub-committee met May 27, 2004. The committee agreed on a rating system of 0-3 rating. They developed a spreadsheet listing the critical facilities, location and rank. Each jurisdiction will develop a critical services list.

In case of a disaster which services would be imperative to each jurisdiction day-to-day operation in 48 hours up to 72 hours? Which day-to-day city services can be suspended during a disaster?

- Paychecks
- Personnel effected; pulled away from their jobs to assist recovery efforts
- EOC operation in the City of Pico Rivera
- Water; distribution of water from Pico Rivera Water District and Pico Rivera Water Department
- Public Works Department; Building Inspectors involved in disaster

- Senior Citizen Center; after school programs and day care site for schools
- Los Angeles County Fire Department; Input for the worst case scenario
- Los Angeles County Sheriff's Department services to assist the each jurisdiction's operation, security and safety issues?

What would be the financial impact to each jurisdiction?

Each jurisdiction will compile and rate a list of services.

El Rancho School District has three middle and high schools that become a Red Cross Shelter during a disaster. Does El Rancho School District have an agreement with the Red Cross? This could be a school mitigation strategy.

Clarify who is responsible for:

- Supply management
- Financial impact
- Staffing
- Janitorial service

SEMS Plan – After hour plan? Staffing contacts? What does the school need to maintain service after a disaster?

List of outside utilities for each jurisdiction:

- Vendors
- Suppliers
- Medical care
- Telecommunication
- Equipment

Does the service provider have the capability to assist the jurisdictions? The jurisdictions will need to identify the prevention of losing service or response to the disaster.

Pico Rivera has open PO's to Home Depot, Grocery stores, Portable restrooms, and U-Haul. El Rancho School District has a list of service providers as well. El Rancho Water District has vendor agreements.

In the Risk Analysis, Hazardous Materials is rated as a high risk to the jurisdictions. There are three Los Angeles County Fire Stations which respond to the danger of hazardous materials. The Fire Stations have standard response procedures for hazardous material incidents or disasters. The fire representatives will review the hazardous materials list for the City of Pico Rivera. They will assess and rate each from 1-3 (high, moderate, and low).

There are pipelines buried along the train railways. The team will rate the list, from high to low, with recommendations for a disaster.

Dimensions will email the Risk Analysis to the fire representatives.

Biological risk – West Nile – Separate it out in the questionnaire.

The team edited the 2 page questionnaire to one page. El Rancho School District can distribute the questionnaire in registration packets. They will make the questionnaire available at two School Board meetings and place on their counters. Pico Rivera Water District will place the questionnaire on their counters. Pico Rivera will publish the questionnaire in their monthly newsletter the "Profiler". The team agreed on an article overview of the DMA 2000 Plan in the Profiler to explain the importance of the disaster survey for public input. Pico Rivera has a Career Preparation Opportunity Program for students. Pico Rivera could enlist the interns to go door-to-

door to solicit citizen input. The City will have one contact for the return of the questionnaire. The public can return or mail the questionnaire to City Hall.

Dimensions will send an outline to Michael to support the article. Michael and Raymond will work together to reformat the one page questionnaire. The completed disaster questionnaire will be available for the July 17, 2004 meeting.

New Business

Date received:

- Contract between the City of Pico Rivera and the Los Angeles County Sheriff's Department
- Southern California Edison Hazard Mitigation Plan 2004 for the City of Pico Rivera
- Stakeholders letter to the Mayors and City Managers of the City of Whittier, City of Santa Fe Springs, City of Downey, City of Commerce, City of Montebello, and the Los Angeles County Fire Department, Los Angeles County Sheriff's Department,

Michael will generate a facilities asset values list and send out to the team members. The team will to review and rate at the next meeting.

Dimensions will have a draft of the Plan at the next meeting.

Executive Summary of the Superfund Plume

Hazardous Materials pertaining to Transportation – The list is inconsistent and varies due to the fluctuation in hazardous materials being transported.

Pico Rivera's 8" water mains run through the City of Rosemead. The team will send a letter to Rosemead asking for information.

Additional information needed for:

- Oil lines
- Gas pipeline
- Trains – hazardous materials, pipelines going through their railways

Flood Rating

Meeting adjourned at 2:52 p.m.

Meeting 5

Pico Rivera Hazard Mitigation Planning Meeting
July 11, 2004

Meeting Called to Order

The 4th.Mmeeting of the City of Pico Rivera Hazard Mitigation Planning Team was called to order at 1:35 PM.

Introductions

Members Present

Michael Moore	Public Works	801-4420	mmoore@pico-rivera.org
Raymond Chavez	Administration	801-4217	rchavez@pico-rivera.org
Michael Gersch	Administrative Services	801-4399	mgersch@pico-rivera.org
Scott Wasserman	City of Pico Rivera	801-4430	swasserman@pico-rivera.org
Sam Serrano	ERUSD	801-5274	sserrano@erusd.k12.ca.us
Bill Shannon	Housing Department	801-4388	wshannon@pico-rivera.org
Ed Thatcher	LACO Fire Department	860-5524	ethacher@lacofd.org
James Riker	Community Development	801-4332	jriker@picor-rivera.org
Jesse Barreras	Pico Water		Picowaterdistrict@aol.com
Carlos Jimenez	El Rancho USD	801-5274	cjimenez@erusd.k12.ca.us
Jan Rogala	Dimensions, Consultant	916.712-1697	janrogala@aol.com

Consideration of minutes: July 12, 2004 meeting minutes were review and adopted by the team.

Old Business:

Stakeholders

Ed Thatcher from the LA County Fire Department was present at the meeting. Chief Thatcher identified the most critical areas in the City from his perspective as being the railroad crossings particularly that at Imperial and Passons.

Discussion was held on the Counties Communication System in an emergency and the past experience with system failure.

Discussion was held on the threat to fuel pipelines, and water and fire water supplies and their failure rate in disasters. All of Pico Rivera is shown to be in an Earthquake liquefaction zone and earthquakes are rated as high risk for the community

Status of the Questionnaire

It was reported that there will be a bi-lingual edition of the questionnaire available in approximately two weeks.

The questionnaire will be available to distribute at community events, other questionnaires will go out by mail and email from the three jurisdictions. They will be preceded by an article in the City Newspaper describing the program and questionnaire.

Data received:

El Rancho Unified School District Facilities with critical facilities marked
Red Cross Agreement for Mass Shelter Use
El Rancho School District Emergency Procedures

Data Still needed:

Executive Summary of the Superfund Plume

Pico Rivera's 8" water mains run through the City of Rosemead. The team will send a letter to Rosemead asking for information.

Additional information needed for:

- Oil lines
- Gas pipeline
- Trains – hazardous materials, pipelines going through their railways

New Business:

Pico Rivera will hold a Hazard Mitigation Strategy meeting prior to the next meeting to develop strategies

Meeting 6

Pico Rivera Hazard Mitigation Planning Team
August 9, 2004 Meeting
Meeting Called to Order

The fifth meeting of the City of Pico Rivera Hazard Mitigation Planning Team was called to order at 1:35 PM.

Introductions

Members Present

Adrian L Diaz	Water Dept.	562.801-4462	adias@pico-rivera.org
Yolanda R Serna	Finance	562.801-4318	yserna@pico-rivera.org
Michelle Ramirez	Housing	562.801-4349	mr Ramirez@pico-rivera.org
Raymond Chavez	Administration	562.801-4217	rchavez@pico-rivera.org
Tina Hansen	Recreation	562.801-4437	thansen@pico-rivera.org
Michael Gersch	Administration	562.801-4399	mgersch@pico-rivera.org
Michael Moore	Public Works	562.801-4420	mmoore@pico-rivera.org
James Riker	Community Development	562.801-4332	jriker@pico-rivera.org
Jesse Barreras	Pico Water District	562.692-3756	picowaterdist.@aol.com
Daniel Sprenger	Pico Water District	562.692-3756	sprenger.edsc@verizon.net
Jan Rogala	Dimensions	707.374-6529	janrogala@aol.com
Theresa Hayes	Dimensions	626.286-8305	theresa@dimensionsui.com

Consideration of minutes: July 12 meeting minutes were reviewed and adopted with the below changes.

- Considerations of minutes: July 12, 2004 changed to June 14, 2004
- Page 2, line 4; water mains to aged gasoline

Documents

Handout of the 1st Draft of the Pico Rivera DMA 2000 Plan

- A copy of the first draft of the Pico Rivera Hazard Mitigation Plan was given to the committee for their review.
- A matrix of the Pico Rivera mitigation strategies

Documents received from Pico Rivera:

- Redevelopment Plan 1996
- Los Angeles County Earthquake Maps & Reports. Provided by the DMAC's of Areas D, E, & G. June 2004
- Development of Mitigation Strategies, Water Systems, and Los Angeles County Fire Dept.
- Questionnaire Results
- Agenda, Sign In Sheet from the Development of Mitigation Strategies Meeting July 22, 2004

Old Business

Public Input Questionnaire

The 314 Public Input Questionnaires were collected and tabulated by the Planning Team. The questionnaire was made available at:

- El Rancho Schools
- City Employees & Citizens
- Park & Recreation classes
- Swim lessons
- Walmart Store,
- Pico Rivera Water District
- Presentation at Adult School

There will be an article in the September issue of the local newspaper describing the Hazard Mitigation Plan and Project.

Draft Plan Review

Dimensions gave the Planning Team 2 hard copies and 1 CD of their DMA 2000 Plan. It is 50% complete at this time. Dimensions asked the Planning Team to review the rough draft for structural integrity, corrections, and input within the next two weeks. Representation of El Rancho School District and Pico Rivera Water District will be added to the next edition. All comments and suggestions will go through Michael Moore.

Pico Rivera Water District

Daniel Sprenger, General Manager, joined the Planning Team. Jan briefed Daniel on the DMA 2000 Plan and Process. Pico Rivera Water District participated in the Mitigation Development Strategy meeting.

Army Corps of Engineer has been asked for their mitigation strategies concerning Los Angeles County Dams, Flood Plain Inundation Area, and Flood Control. The Whittier Narrows Dam will impact Pico Rivera. The Planning Team can make recommendations to The Army Corps of Engineer concerning their hazard risks.

Data Update

- Executive Summary Superfund Plume Sites
- Oil, gas lines, trains
- Aged 8" Gasoline through Rosemead

Railroad

Hazardous materials have been, are currently, and will be transported through the City of Pico Rivera.

Alameda Corridor

A report has been supplied by the City of Walnut for Pico Rivera to glean pertinent information for their DMA 2000 Plan.

Critical Facilities

No changes for the City of Pico Rivera. El Rancho School District gave their evacuation site list. Dimensions will need to check with them concerning any changes to their critical facilities list.

Hazard Mitigation Strategy

The Planning Team reviewed and edited the Hazard Mitigation Matrix. All changes are listed below:

- # 2 – Funding fiscal 05-06 budget, Cost: 50K

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

- # 3 – Funding fiscal 05-06 budget, Cost: 10K
- # 4 – Flood – Severe Weather- Storm drainage, Sub pumps, Comprehensive Emergency Response, Cost: 200k
- # 5 –Emergency Staging Area, Los Angeles County Fire Department recommendation, 30-40 Staff hours to study the feasibility in housed, Cost: 40K
- # 6 –A Risk Assessment of Los Angeles County Fire Department Hazardous Materials Division notification needs to be done, for Public Education – training, hand outs, staffing; it would be an on going project, Cost 125K
- # 7 –GIS project. Create layers of City of Pico Rivera, Los Angeles County Fire and Sheriff' s Department: Study, distribute to appropriate entities. Cost: 15K
- # 8 –City: Water department chemical facilities upgrade, 100K @ 8 sites. Funding source: Grant
- # 9 –Study for generators, size, power, staff expertise, Timeline: fiscal year 05-06, Cost: 75 K
- #10 – Grant writers, on-going, Fed & State automatically notifies the City of grant opportunities, Cost: 50K
- #11 City has 4, ok, Pico Water District – 4 wells and 1 gas powered pump- couple of stand by sites. Study indicates no inter-ties, would be able to operate. IF they lost all sites, no short term solution, no historical data to indicate affects, Project: Engineering feasibility study, Funding: fiscal 05-06 budget, Cost 200K
- # 12 –GIS mapping, Funding: fiscal 05-06 budget, Cost 15K
- # 13 –Needs assessment, Create list bridges, traffic signals, Funding: fiscal 05-06 budget
- # 14 – On- going project, required FEMA, develop
- # 15 – Coordinate
- # 16 – Resources – proposals
- # 17 – Permanent, developing SOP, Rio Hondo Park, Rio Vista Park, Streamland Park, Smith Park and Pico Rivera
- # 18 – Delete
- # 19 – Delete
- # 20 – Delete
- # 21 – Delete
- # 22 – Ham Operators – Public Education
- # 24 – Done, Historical mitigation\
- Addition – Digitize records

Adjourned at 3:05pm

Appendix B – Plan Adoption Documentation

City of Pico Rivera

RESOLUTION NO. 6070

**A RESOLUTION OF THE CITY COUNCIL OF THE
CITY OF PICO RIVERA, CALIFORNIA, ADOPTING
THE MULTI-JURISDICTIONAL LOCAL HAZARD
MITIGATION PLAN.**

WHEREAS, the federal Disaster Management Act of 2000 (DMA 2000), which amended the Robert T. Stafford Disaster Relief and Emergency Services Act, requires every local, county, and state government to have a State and Federal approved Local Hazard Mitigation Plan (“Plan”) in order to be eligible for pre- and post-disaster grants and funding; and

WHEREAS, City staff joined with staff from the El Rancho Unified School District and the Pico Water District to form a diverse team to prepare such a Plan, soliciting input from stakeholders, local agencies, and the public at large; and

WHEREAS, the Pico Rivera Plan focuses on potential impacts of earthquakes, floods, and wildfires, and includes an assessment of these natural hazards, a plan to mitigate them, and methods of monitoring, evaluating, and updating the Plan at least once every five years.

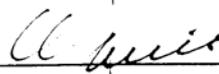
**THE CITY COUNCIL OF THE CITY OF PICO RIVERA, CALIFORNIA, DOES
HEREBY RESOLVE AS FOLLOWS:**

SECTION 1: The multi-jurisdictional Local Hazard Mitigation Plan is hereby adopted.

SECTION 2: The City Manager is hereby granted authority to amend and update the Plan.

SECTION 3: The City Clerk shall attest to the passage of this Resolution and it shall thereupon be in full force and effect.

ADOPTED AND APPROVED THIS 6th **DAY OF** December, 2004.

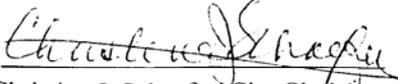


Carlos A. Garcia, Mayor

CITY OF PICO RIVERA MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
VERSION 1.1 (NOVEMBER 2004)

RESOLUTION NO. 6070
Page 2

ATTEST:


Christine J. Schaefer, City Clerk

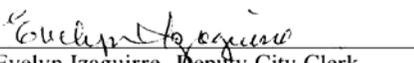
APPROVED AS TO FORM:


James M. Casso, City Attorney

AYES: Armenta, Proo, Ramirez, Salcido, Garcia
NOES: None
ABSENT: None
ABSTAIN: None

I, Evelyn Izaguirre do hereby certify that I am the duly appointed and acting Deputy City Clerk of Pico Rivera, California and that the foregoing Resolution No. 6070 Adopting the Multi-Jurisdictional Local Hazard Mitigation Plan is a copy of the original in the City Clerk's Office.

I declare the foregoing to be true and correct under penalty of perjury, this 15th day of December 2004.


Evelyn Izaguirre, Deputy City Clerk
City of Pico Rivera, California

Pico Water District

The Pico Water District formally adopted the Hazard Mitigation Plan at a regularly scheduled Board Meeting on November 3, 2004. The minutes from that meeting follow: (refer to Page 2, paragraph 3.)

MINUTES OF A REGULAR MEETING
OF THE BOARD OF DIRECTORS
OF THE PICO WATER DISTRICT

A regular meeting of the Board of Directors of the Pico Water District was held at the office of the District located at 4843 South Church Street, Pico Rivera, California, on Wednesday, November 3, 2004, at 5:02 P.M.

President Robert A. Martinez presided over the meeting.

President Robert A. Martinez asked Mr. Joe Ruggeri to lead everyone in the pledge of allegiance.

Ms. Foster proceeded with the roll call of the attending Board members. Present from the beginning of the meeting were, President Robert A. Martinez, Vice President Salvador Orozco, Director Fred L. Silva, Director Antonio A. Martinez, and Director Andres O. Gonzalez. Also present from the beginning of the meeting was Mr. Daniel L. Sprenger, General Manager; Mr. Jim Ciampa, District's Legal Counsel; Mrs. Darlene Harris, Assistant to the City Manager, City of Pico Rivera; Mr. Richard Briones, former District Vice President/Director; Mr. Joe Ruggeri, of Inhance Utility Solutions; and Ms. Susan Foster, District's Recording Secretary

President Robert A. Martinez then proceeded to the computer software presentations. Representatives of Inhance gave an in-depth telecommunication presentation of their computer systems that included accounts receivable, accounts payable, purchase orders, and inventory programs.

President Robert A. Martinez inquired if there were any public comments, there were none.

President Robert A. Martinez then inquired if there were any Directors' comments. Director Fred L. Silva informed the Board that the recent ACWA Newsletter announced Mr. Wes Bannister was elected as Chairman of Metropolitan Water District.

President Robert A. Martinez proceeded to the adoption of the Agenda. Vice President Salvador Orozco made a motion to approve the Agenda as presented. Motion was seconded by Director Antonio A. Martinez. The Board unanimously approved the Agenda as presented by a vote of 5 to 0.

President Robert A. Martinez then proceeded to the next item on the Agenda, consideration and possible approval of the October 20, 2004, Regular Board meeting minutes, for corrections and/or deletions. Director Fred L. Silva made a motion to approve the minutes if there were no corrections or deletions. Motion was seconded by Director Antonio A. Martinez. Motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of the District's accounts payable now due and accounts paid. Vice President Salvador Orozco made a motion to approve the District's accounts payable now due and accounts paid. Motion was seconded by Director Andres O. Gonzalez. After some discussion, the Board unanimously approved the accounts payable now due of \$77,509.26 and accounts paid of \$95,764.79 by a vote of 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of the Hazard Mitigation Plan as drafted for submittal to the State of California. Director Antonio A. Martinez made a motion to approve the Hazard Mitigation Plan as drafted for submittal to the State of California. Motion was seconded by Vice President Salvador Orozco. After some discussion, motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez then proceeded to the next item on the Agenda, consideration and possible approval of Shields Consulting Group contract renewal covering fiscal years 2004/2005 and 2005/2006. After some discussion, Director Andres O. Gonzalez made a motion to table this item to the next regular Board meeting. Motion was seconded by Vice President Salvador Orozco. Motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of Tesco's proposal on upgrading telemetry system. Director Antonio A. Martinez made a motion to approve Tesco's proposal to upgrade the telemetry system. Motion was seconded by Director Andres O. Gonzalez. After some discussion, Director Antonio A. Martinez withdrew his motion, as Director Andres O. Gonzalez made a motion to table this item. Motion to table was seconded by Director Antonio A. Martinez. Motion to table carried unanimously by a vote of 5 to 0.

President Robert A. Martinez then proceeded to the next item on the Agenda, consideration and possible approval of architect for the District's Juarez property. Vice President Salvador Orozco made a motion to approve Pitt & Associates proposal as architect for the District's Juarez property. Motion was seconded by Director Andres O. Gonzalez. After some discussion, Director Andres O. Gonzalez made a motion to amend the motion to approve Pitt & Associates subject to review and approval of contract by legal

counsel. Amendment to the motion was seconded by Director Antonio A. Martinez. After further discussion the motion to approve the award to Pitt & Associates at a cost of \$8,850.00 plus potential additional cost of \$85.00 per hour subject to legal counsel's review and approval of their formal contract carried unanimously by a vote of 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of Cate Reservoir repairs. Director Fred L. Silva made a motion to approve Cate Reservoir repairs to be done by Dive Corr for \$3,200. Motion was seconded by Director Antonio A. Martinez. After some discussion, motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez then proceeded to the next item on the Agenda, consideration and possible approval of District Safety Awards presentation. Director Antonio A. Martinez made a motion to approve a District Safety Awards presentation. Motion was seconded by Director Andres O. Gonzalez. After some discussion, Director Antonio A. Martinez amended his motion to have the event at Clearman's with a price not to exceed \$1,300. Amendment to the motion was seconded by Director Andres O. Gonzalez. Motion carried unanimously as amended by a vote of 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of \$60,000 to \$70,000 for new District computer software programs. Demonstration of software to be given by Harris Corporation. With recommendation of computer software by the General Manager. Director Antonio A. Martinez made a motion to approve \$70,000 for Inhance computer software programs. Motion was seconded by Director Andres O. Gonzalez. After some discussion, motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez then proceeded to the next item on the Agenda, consideration and possible approval of Shields Consulting Group contract renewal covering fiscal years 2004/2005 and 2005/2006. Director Andres O. Gonzalez made a motion to approve renewing Shields Consulting Group contract covering fiscal years 2004/2005 and 2005/2006. Motion was seconded by Director Antonio A. Martinez. After some discussion, motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of Shields Consulting Group contract for cost recovery of utilities and telecommunications. Director Andres O. Gonzalez made a motion to table this item. Motion was seconded by Vice President Salvador Orozco. Motion carried unanimously by a vote of 5 to 0.

President Robert A. Martinez then proceeded to the next item on the Agenda, consideration and possible approval securing bids for installation of 4" main and hydrant on

Citrus from Olympic Boulevard. Vice President Salvador Orozco made a motion to table this item. Motion was seconded by Director Andres O. Gonzalez. Motion to table carried unanimously by a vote to 5 to 0.

President Robert A. Martinez proceeded to the next Agenda item, consideration and possible approval of bringing current pay rates in line with other comparable salaries determined by reviewing other water districts and calculating new pay scales, accounting for certifications reached and water courses completed. Director Andres O. Gonzalez made a motion to table this item. Motion to table was seconded by Director Antonio A. Martinez. Motion to table carried unanimously by a vote of 5 to 0.

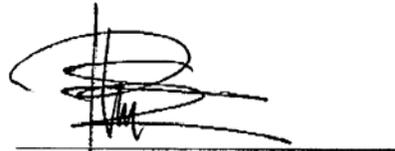
President Robert A. Martinez proceeded to the next Agenda item, report on items of correspondence received by the District. Mr. Sprenger reported to the Board on the upcoming ACWA conference.

President Robert A. Martinez asked for the General Manager's report on District operations. Mr. Sprenger thoroughly reviewed with the Board on recent water leaks and hydrant knock and announced that Mr. Barreras will be leaving the District.

President Robert A. Martinez then asked for Legal Counsel's report. Mr. Ciampa discussed the District's pumping allocations with the Board and the need for the District to start looking at lease options. Mr. Ciampa also reported to the Board on the status of the fire hydrant and SBC claims. He also discussed Proposition 1A, Drought Preparedness Article in the ACWA Newsletter, and the California Supreme Court decision regarding JPIA.

President Robert A. Martinez then asked if there were any future Agenda items that the Board wanted to include on the next Agenda. The next Agenda shall include for discussion and possible action those items tabled until the next meeting.

There being no further business to come before the Board, on motion made by Director Fred L. Silva, seconded by Director Antonio A. Martinez and unanimously carried by a vote of 5 to 0, the Board meeting adjourned at 8:18 P.M.



Robert A. Martinez, President

Attest:



Daniel L. Sprenger, General Manager/Secretary

El Rancho Unified School District



EL RANCHO UNIFIED SCHOOL DISTRICT

8910 E. Slauson Avenue, Pico Rivera, California 90660
Tel: (562) 942-1500 • Fax: (562) 949-4647

BOARD OF EDUCATION

Frank P. Boyce
Vincent Chavez
Rita Jo Ramirez
Lupe Salas
Raul P. Salcido

RESOLUTION NO. 19-2004/05

SUPERINTENDENT
Norbert D. Genis

RESOLUTION OF THE EL RANCHO UNIFIED SCHOOL DISTRICT TO ADOPT THE MULTI-JURISDICTION HAZARD MITIGATION PLAN

WHEREAS, the Federal Disaster Management Act of 2000 (DMA 2000), which amended the Robert T. Stafford Disaster Relief and Emergency Services Act, requires every local, county and State government to have an approved Natural Hazards Mitigation Plan by November 1, 2004 in order to be eligible for pre- and post-disaster grants and funding; and

WHEREAS, the El Rancho Unified School District joined with the City of Pico Rivera and the Pico Water District to form a diverse team to prepare such a plan, the "Multi-Jurisdiction Hazard Mitigation Plan", soliciting input from stakeholders, local agencies, and the public at large, and;

WHEREAS, the Multi-Jurisdiction Hazard Mitigation Plan focuses on potential impacts of earthquakes, floods and wildfires, and includes an assessment of these natural hazards, a plan to mitigate them, and methods of monitoring, evaluating, and updating the Plan at least every five years;

NOW, THEREFORE, BE IT RESOLVED that the El Rancho Unified School District does hereby, adopt and approve, the Multi-Jurisdiction Hazard Mitigation Plan.

APPROVED AND ADOPTED this 7th day of December 2004.


Secretary to the Board of Education

D. Anne Eichman
Assistant Superintendent
Research/Evaluation/Staff Development

ADMINISTRATION
Susanna S. Smith
Assistant Superintendent
Educational Services

Alfred L. Ogas
Assistant Superintendent
Human Resources, Business & Support Services