Santa Monica-Malibu Unified School District

&

Santa Monica College

Disaster Mitigation Act of 2000

All-Hazard Mitigation Plan

Version 1.0

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Section 1 – Introduction

Executive Summary

To summarize, this document contains:

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

This document also provides a framework for the identification and coordination of Hazard Mitigation strategies developed in the Santa Monica-Malibu USD and Santa Monica College with other plans; especially those developed by District 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, identifying, and implementing actions to minimize or eliminate the hazard's 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 Santa Monica-Malibu USD and Santa Monica College.

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

The strategies presented are deemed appropriate and effective by recommendation of the Santa Monica-Malibu USD and Santa Monica College All-Hazard Mitigation Planning Committee and the District's agencies, departments and private groups.

Upon acceptance by the California Governor's Office of Emergency Services (OES) and the Federal Emergency Management Agency (FEMA), selected strategies will be further developed for funding and implementation by the lead District 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 Santa Monica-Malibu USD and Santa Monica College Hazard Vulnerability Analysis (HVA) that considers natural, technological, and human-caused risks to which the District and its political subdivisions are vulnerable. The plan describes strategies that government and private sector organizations may utilize to develop their capabilities to mitigate those hazards.

It is understood that the mitigation strategies adopted in this plan are recommendations only, and they must be approved by the Superintendent of Schools and School Board and funded in order to be implemented as official Hazard Mitigation Strategies.

Santa Monica-Malibu Unified School District

Mission Statement

Extraordinary achievement for ALL students while simultaneously closing the achievement gap.

Vision

As a community of learners the Santa Monica-Malibu USD Unified School District works together in a nurturing environment to help students be visionary, versatile thinkers; resourceful, life-long learners; effective, multilingual communicators and global citizens. We are a rich, culturally diverse community that values the contributions of all its members and strives to promote social justice. We exist to assist all students in their pursuit of academic achievement, strength of character, and personal growth and to support them in their exploration of intellectual, artistic, technological, physical, and social expression.

Beliefs

We believe in equality of opportunity and equitable access to an excellent education for all students.

We believe in the strategic plan created by our community to guide our work.

We believe that students, families, teachers, and support staff share in the responsibility for each child's learning.

We believe that safe, clean, and functional school and district facilities are conducive to learning.

We believe that the district should operate within responsible financial boundaries that include future fiscal planning which reflects instructional priorities and aggressively seeks available funding sources.

We believe high standards and expectations for all our students promote rigorous learning environments.

We believe acceptance, appreciation of and connection with the diversity of students and families in SMMUSD are essential for effective teaching and learning.

We believe intelligence is learned and effort creates ability.

We believe all children are capable of developing intelligence when they are offered proper instruction and the educational support and/or interventions to meet their specific learning needs.

We believe that in partnership with students and families, teachers and district staff:

Are committed to students and their own learning.

Are responsible for managing and monitoring student learning.

Are responsible for developing intelligence in students.

Think systemically about their practice and learn from experience.

Know the subjects they teach and how to teach those subjects to students

We believe that teachers and principals are lead members of our learning community.

We believe two-way accountability between school site credentialed and classified staff and Central Office Committees promotes a culture of shared responsibility for student learning. Central Office Committees must have their goals and accountability system linked to providing support to the work of teachers and site leaders.

We believe resources must be aligned to the goals and strategies for increasing student achievement for all while closing the achievement gap.

We believe all members of the district should strive to eliminate all forms of discrimination, including: that based race, gender, color, religion, national origin, ethnic group, marital or parental status, physical or mental disability, sexual orientation or the perception of one or more of such characteristics

Santa Monica College

Vision Statement

Changing Lives Through Excellence In Education

Mission Statement

Santa Monica College strives to create a learning environment that both challenges our students and supports them in achieving their educational goals. We prepare our students to contribute to the global community as they develop an understanding of their personal relationship to the world's social, cultural, political, economic, technological, and natural environments.

To fulfill this mission, the College provides open and affordable access to excellent associate degree and occupational certificate programs. These programs prepare students for successful careers, develop their college-level skills, enable their transfer to universities, and foster their personal commitment to lifelong learning.

Santa Monica College serves, represents, and embraces the community's racial and cultural diversity. We promote the exchange of ideas in an open, caring community of learners, and recognize the critical importance of each individual to the achievement of our **vision.**

The SMC Strategic Planning Goals

In pursuit of the College's Vision and Mission, the District Board of Trustees adopted six goals:

GOAL 1 STUDENT SUCCESS:

The College's learning environment will challenge, motivate, and support students. The College will use data on student outcomes to enhance educational programs and services.

GOAL 2 ACADEMIC EXCELLENCE:

The College will uphold its tradition of academic excellence and innovation centered on a strong core of classified staff, faculty, and administrators. All are dedicated to the lifelong development of individual skills and competencies.

GOAL 3 COMMUNITY OF MUTUAL RESPECT:

The College will be exemplary as a diverse community of mutual respect—a community characterized by respect for the individual, free exchange of ideas, broad collaboration, and participation in college governance.

GOAL 4 EFFECTIVE USE OF TECHNOLOGY:

The College will promote access to technology to achieve its goals.

GOAL 5 COMMUNITY PARTNERSHIP:

The College will develop public/private partnerships to meet the educational needs of our community, ensure financial viability, and promote employment of our students and alumni.

The College will acquire, plan, develop, and maintain facilities and equipment to provide the best possible educational environment and promote the use of sustainable resources.

Plan Adoption

Process

The DMA 2000 Multi-Jurisdictional Hazard Mitigation Plan Draft will be reviewed and approved by the Santa Monica-Malibu Unified School District & Santa Monica College's DMA 2000 Hazard Mitigation Planning Committee. SMMUSD's Board of Education will formally adopted their Plan on July 28, 2005. The adoption resolution will be submitted with the Plan to the State of California Office of Emergency Services and FEMA for consideration and adoption on the District's behalf.

SMC will forward their Plan to the State of California and FEMA for a courtesy review for potential approval and completeness. After successfully passing, the State of California courtesy review the plan will be forwarded to the Santa Monica College District's Board of Supervisors for consideration and adoption on behalf of the District.

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

Ongoing Maintenance and Procedures

The Santa Monica-Malibu USD and Santa Monica College DMA 2000 Hazard Mitigation Planning Committee shall review and revise the plan every 12 months: That review will:

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

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

SMMUSD PLAN ADOPTION RESOLUTION

Insert Resolution from Board

Legal Authority

Federal Laws

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

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

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

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

State Laws

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

- California Earthquake Hazards Reduction Act of 1986
- Caltrans' Seismic Retrofit Program
- California Fire Alliance
- California Earthquake Authority's Seismic Retrofit Program
- NFIP, administered by the DWR
- State planning law and OPR's general plan guidance documents
- CDI Residential Retrofit Program
- California Education Code Katz Act Section 35295-35297
- California Government Code Petris Bill Section 8607
- California Education Code The Huges Bill Sec. 35294.2
- Field Act/Garrison Act/Riley Act – Building Codes

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

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

Local Codes & Ordinances

The jurisdictions recognize and adhere to Federal, State, County, and City codes and ordinances for building codes, land use, and development.

Additional Planning Mechanisms

The Planning committee reviewed the City of Santa Monica's DMA 2000 Plan and the City of Malibu's Emergency Operations Plan. The information concerning hazards and mitigation strategies were used as a baseline in hazard prioritization whenever feasible.

In addition, the committee reviewed current school law and incorporated the law's requirements with future mitigation strategy pertaining to keeping schools in safe repair through modernization.

Identified Mitigation Constraints

Santa Monica-Malibu USD schools and facilities are located in the Cities of Santa Monica and Malibu. The Cities and Los Angeles County are responsible for law enforcement and fire protections. Santa Monica College is located in the City of Santa Monica with six off site repeater towers. SMMUSD and SMC are not directly in control of First Responder action or mitigation. Which include:

- Law Enforcement from California Highway Patrol, Los Angeles County Sheriff's department, Los Angeles County Fire Department, the City of Santa Monica Police Department and Fire Department.

- Transportation Loss greatly impacts both school districts. The ability for students to travel to and from school is important from both an evacuation and economic standpoint. The school districts are dependent on city, county, and state roadways, plus freeways to transport students to and from schools.

- Aviation Disasters is a constant threat to all the facilities for SMMUSD and SMC. The below airports are located and operate near the school grounds. Their flight patterns are over the schools.

    - √ Los Angeles Airport: LAX
    - √ Van Nuys Airport
    - √ Ontario Airport
    - √ John Wayne Airport
    - √ Hawthorne Airport
    - √ Long Beach Airport
    - √ Santa Monica Airport

Section 2 – Planning Process

Hazard Mitigation Planning Participation

Planning Committee Members

Name	Title	Phone	Email
Gary Rose	Maintenance Director Facilities Department	310 434-4377	Rose_Gary@smc.edu
Tony Prestby	Coordinator Officer of Public Programs	310 434-4271	Prestby_Tony@smc.edu
Cozetta Wilson-Carlton	Risk Manager	310 434-4493	Wilson_Cozetta@smc.edu
David Muller	Assistant V.P. of Facilities	310 434-4144	Muller_David@smc.edu
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US
Rick Demuth	Assistant Director Facilities	310 450-8338	Demuth@smmusd.org
Michael Hill	Facilities Coordinator	450-8338 ext. 263	MHill@smmusd.org
Greg Brown	Director of Facilities Planning	310 434-4203	Brown_Gregory@smc.edu
Wally Berriman	SMMUSD Director of Facilities	310 450-8338	Berriman@smmusd.org
Winston Braham	Assistant Superintendent Fiscal, Business Services & Chief Financial Officer	310 450-8338 Ext. 286	Winston.Braham@mail.smmusd.org
Judy Neveau	Community Relations Director, SMC	310 434-4304	Neveau_Judy@smc.edu
Marolyn Freedman	Coordinator of Pupil	310 450-8338	freedman@smmusd.org
Eilleen Miller	Chief of Police	310 434-4302	Miller_Eileen@smc.edu
Bob Dammer	Director of Network Services	310 434-4397	Dammer_Bob@smc.edu
Theresa Hayes	Director of Operations Dimensions Unlimited	626 286-8305	Theresa@dimensionsui.com
Kristel Arnott	Consultant Dimensions	626 286-8305	Kristel@dimensionsui.com

Adjunct Contributors

Name	Title	Phone	E-mail
Ruthy Mangle	Asst. Director GIS	310 866-8063	mangle@smmusd.org
Virginia Hyatt	Purchasing Director	310 450-8338 x 249	Hyatt@smmusd.org
Neal Abramson	Director of Transportation	310 450-8338 x 168	Abramson@smmusd.org
Orlando Griego	Director of Food; Nutrition Services	310 450-8338 x 342	griego@smmusd.org
Mark Engfer	Telecom Supervisor	310 434-3014	Engfer_mark@smc.edu
Steve Herbert	Chief Engineer, KCRW	310 434-4652	Steve.Herbert@KCRW.com

Hazard Mitigation Planning Committee By-laws

1. The SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee was organized in February 2005.

2. Members of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee shall elect a chair/co-chair.

3. Members of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee agree to meet semi-monthly to identify hazard priorities and review, identify and implement the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD hazard mitigation strategy recommendations.

4. The SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee agrees to make and pass policy recommendations by a vote of a simple majority of those members present at the scheduled meeting.

5. Any single Hazard Mitigation Planning Committee member may request, at a scheduled meeting of the SANTA MONICA COLLEGE and SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee as a whole, an adoption of, or amendment to the plan or process.

6. The SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee may form subcommittees to review and develop those feasible hazard mitigation strategy recommendations identified that will be reviewed by the Hazard Mitigation Planning Committee 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 departments, committees, commissions, private citizens and organizations.

8. The SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee will identify constraints to mitigation strategies that affect SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD's ability, authority, and responsibility to implement those strategies.

9. Public Input will be implemented by direction of the Committee in the following manner: To be decided

Hazard Mitigation Planning Tasks

1. Coordinate all-hazard mitigation planning tasks and activities with the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD administrative staff and departments to develop a multi-hazards disaster mitigation plan and support the Hazard Mitigation Planning Committee chair/co-chair's oversight of the planning process.

2. Review incorporation of existing plans, studies, reports, and technical information.

3. Assist in carrying out the goals and objectives of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Plan in compliance with FEMA DMA 2000 Hazard Mitigation Act.

4. Prioritize risks for implementing mitigation strategies.

5. Select designated Critical Facilities owned by SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD and in proximity to SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD facilities, and develop a risk exposure analysis for those facilities.

6. Select highest priority and most-desired mitigation recommendations and develop those recommendations for further action by each member of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee.

7. Review mitigation planning drafts, recommendations, and updates.

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

9. Integrate the plan with all phases of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD's Multi-hazard Functional Plan and Safety Element to the General Plan.

10. Provide for the implementation of Planning Committee decisions.

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

12. Establish Hazard Mitigation Planning Committee.

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

14. Bring forward community concerns through private and public input

15. Identify implementation resources

16. Identify lead departments, commissions and committees for implementation of strategies

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

18. Evaluate and carry out mitigation activities, as feasible.

19. Assist in implementation of funding identification and procurement

Hazard Mitigation Planning Goals

1. Support the priorities of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD; its mandates, employees, students' citizens and the business community.

2. Promote economic development consistent with seismic, floodplain and risk management guidance as developed by the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD and its departments, committees and/or commissions.

3. Provide for an effective public awareness program for natural, human-caused, and technological hazards present in the SANTA MONICA COLLEGE-SANTA MONICA MALIBU USD.

4. Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD.

5. Promote the recognition of the real value of hazard mitigation to public facilities, public safety, and the welfare of all citizens of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD.

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

Hazard Mitigation Planning Objectives

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

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

3. Identify mitigation strategies that will allow the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD to perform its primary mission and goals.

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

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

6. Identify lead SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Departments, Commissions, and Committees that have an interest in mitigation of specific hazards.

7. Develop a standard mitigation program utilizing authorities, policies and programs of each SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Department, Commission, and/or Committee.

8. Organize, train, and maintain an effective and ongoing SANTA MONICA COLLEGE- and SANTA MONICA MALIBU USD Hazard Mitigation Planning Committee that will facilitate implementation of the SANTA MONICA COLLEGE-and SANTA MONICA MALIBU USD All-Hazard Mitigation Plan.

9. Review and update other SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD programs to identify current and future mitigation goals and objectives in compliance with appropriate city, county, state and Federal requirements.

10. Gain support of the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD's administration for the SANTA MONICA COLLEGE/SANTA MONICA MALIBU USD Multi-Hazard Mitigation Plan implementation.

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

Hazard Mitigation Planning Public Participation

SMMUSD and SMC used several methods to involve their clients, students, public, vendors, and stakeholders.

Methodology:

- Public Meetings
- Public Input Questionnaire
- Invitations to Stakeholder/Vendor Planning Committee Meeting
- Invitation to participate in bi-weekly DMA 2000 Hazard Planning Committee Meetings

Listed below are the letters, questionnaires, and list of invitees.

SMMUSD Stakeholder/Vendor List:

A & R WHOLESALE DISTRIBUTORS
Attn: Safety Officer / Risk Management Office
5375 E HUNTER AVENUE ANAHEIM, CA 92807

A-Z BUS SALES
Attn: Safety Officer / Risk Management Office
PO BOX 700
1900 S RIVERSIDE AVENUE COLTON, CA 92324

AAA CONTAINERS & EQUIP SALES
Attn: Safety Officer / Risk Management Office
11120 ALMOND AVENUE FONTANA, CA 92337

ADT SECURITY SERVICES INC
Attn: Safety Officer / Risk Management Office
5400 W ROSECRANS AVENUE HAWTHORNE, CA 90250

AMERICAN FIDELITY ASSURANCE CO
Attn: Safety Officer / Risk Management Office
P.O. BOX 24128 OKLAHOMA CITY, OK 73124

AMERICAN FIDELITY ASSURANCE CO
Attn: Safety Officer / Risk Management Office
P.O. BOX 24128
OKLAHOMA CITY, OK 73124

AMTECH ELEVATOR SERVICES
Attn: Safety Officer / Risk Management Office
9808 FIRESTONE BLVD DOWNEY, CA 90241

ANTELOPE VALLEY BUS COMPANY
Attn: Safety Officer / Risk Management Office
660 W AVENUE L"" LANCASTER, CA 93534

APPLE COMPUTER CORP
Attn: Safety Officer / Risk Management Office
12545 RIATA VISTA CIRCLE
MS: 198-31ES AUSTIN, TX 78727

ASCIP
Attn: Safety Officer / Risk Management Office
12750 CENTER COURT DRIVE
SUITE 220 CERRITOS, CA 90703

ASR FOOD DISTRIBUTORS INC
Attn: Safety Officer / Risk Management Office
6100 SHEILA STREET COMMERCE, CA 90040

ASSOCIATION OF CALIFORNIA
Attn: Safety Officer / Risk Management Office
1575 OLD BAYSHORE HIGHWAY BURLINGAME, CA 94010

AT & T
Attn: Safety Officer / Risk Management Office
900 Route #202-206 Bedminster, NJ 79210

AT&T
Attn: Safety Officer / Risk Management Office
P.O. BOX 10226 NEWARK, NJ 71930

AT&T CONNECTIVITY SOLUTIONS
Attn: Safety Officer / Risk Management Office
5420 MILLSTREAM ROAD MCLEANSVILLE, NC 27301

AVALON FORD
Attn: Safety Officer / Risk Management Office
21212 S. AVALON BLVD. CARSON, CA 90745

AVON CAR RENTAL
Attn: Safety Officer / Risk Management Office
2411 LINCOLN BLVD SANTA MONICA, CA 90405

BAGELWORKS CAFE
Attn: Safety Officer / Risk Management Office
12222 WILSHIRE BLVD #101 LOS ANGELES, CA 90025

BEN'S ASPHALT & MAINTENANCE
Attn: Safety Officer / Risk Management Office
1420 S ALLEC STREET ANAHEIM, CA 92805

BROADWAY HEATING & SHEET METAL
Attn: Safety Officer / Risk Management Office
1748 21ST STREET SANTA MONICA, CA 90404

CALIF. TEACHERS ASSN.(#SDCATA)
Attn: Safety Officer / Risk Management Office
P. O. BOX 45529 SAN FRANCISCO, CA 94145

CALIFORNIA SCHOOL BOARDS ASSN
Attn: Safety Officer / Risk Management Office
3100 BEACON BLVD WEST SACRAMENTO, CA 95691

CANON FINANCIAL SERVICES
Attn: Safety Officer / Risk Management Office
P. O. BOX 4004 CAROL STREAM, IL 60197

CAROUSEL CHILD CARE INC.
Attn: Safety Officer / Risk Management Office
7899 LA TIJERA BLVD. LOS ANGELES, CA 90045

CENTER FOR PERFORMANCE
Attn: Safety Officer / Risk Management Office
317 INVERNESS WAY S STE 150 ENGLEWOOD, CO 80112

CHARLES DUNN REAL ESTATE
Attn: Safety Officer / Risk Management Office
800 W 6TH STREET #600 LOS ANGELES, CA 90017

CHEVRON U.S.A. INC.
Attn: Safety Officer / Risk Management Office
P.O. BOX 2001 CONCORD, CA 94529

CITIZENS MEDICAL GROUP
Attn: Safety Officer / Risk Management Office
11560 W. PICO BLVD WEST LOS ANGELES, CA 90064

CITY OF SANTA MONICA-ACCTG OFF
Attn: Safety Officer / Risk Management Office
1717 4TH STREET SUITE 250 SANTA MONICA, CA 90401

CLARK SECURITY
Attn: Safety Officer / Risk Management Office
1210 N KRAEMER BLVD ANAHEIM, CA 92806

COASTAL ENTERPRISES
Attn: Safety Officer / Risk Management Office
17281 MOUNT WYNNE CIRCLE FOUNTAIN VALLEY, CA 92708

COMPLETE BUSINESS SYSTEMS
Attn: Safety Officer / Risk Management Office
1834 WEST ELEVENTH STREET UPLAND, CA 91786

CORPORATE EXPRESS
Attn: Safety Officer / Risk Management Office
16501 TROJAN WAY SUITE 201 LA MIRADA, CA 90638

CRS
Attn: Safety Officer / Risk Management Office
17440 DALLAS PARKWAY STE 120 DALLAS, TX 75287

DANIELS TIRE SERVICE
Attn: Safety Officer / Risk Management Office
11850 E SLAUSON PO BOX 3708 SANTA FE SPRINGS, CA 90670

DELTA DENTAL PLAN OF CALIF.
Attn: Safety Officer / Risk Management Office
P.O. BOX 860 SAN FRANCISCO, CA 94101

DISCOUNT SCHOOL SUPPLY
Attn: Safety Officer / Risk Management Office
P.O. BOX 7636 SPRECKELS, CA 93962

DON LEE FARMS/GOODMAN FOODS
Attn: Safety Officer / Risk Management Office
200 E. BEACH AVE. INGLEWOOD, CA 90302

DRIFTWOOD DAIRY
Attn: Safety Officer / Risk Management Office
10724 E. LOWER AZUSA ROAD
P.O. BOX 5508 EL MONTE, CA 91734

DURHAM TRANSPORTATION
Attn: Safety Officer / Risk Management Office
1728 MOORPARK ROAD
BOX 437 THOUSAND OAKS, CA 91360

ESCOBAR SEWER CONTRACTOR
Attn: Safety Officer / Risk Management Office
3767 OVERLAND AVENUE LOS ANGELES, CA 90034

FIRST FINANCIAL FED. (#SDFTWK)
Attn: Safety Officer / Risk Management Office
P. O. BOX 90
1600 W. CAMERON AVE. WEST COVINA, CA 91790

G I INDUSTRIES
Attn: Safety Officer / Risk Management Office
195 W LOS ANGELES AVENUE SIMI VALLEY, CA 93065

GALE SUPPLY CO
Attn: Safety Officer / Risk Management Office
2414 WELLESLEY AVE LOS ANGELES, CA 90064

GOLD STAR FOODS
Attn: Safety Officer / Risk Management Office
P.O. BOX 58105 VERNON, CA 90058

GREAT SOURCE EDUCATION GROUP
Attn: Safety Officer / Risk Management Office
181 BALLARDVALE STREET WILMINGTON, MA 18870

HARTFORD LFE INS CO-LRG GROUP
Attn: Safety Officer / Risk Management Office
P.O. BOX 8500-3690 PHILADELPHIA, PA 19178

LACOE/HEAD START
Attn: Safety Officer / Risk Management Office
CLARK BLDG/ ATTN: A/R
9300 E IMPERIAL HWY DOWNEY, CA 90242

LAW FIRE PROTECTION SERVICES
Attn: Safety Officer / Risk Management Office
MARK COSTANTINO SAN DIEGO, CA 92196

MARTIN BROS PLUMBING
Attn: Safety Officer / Risk Management Office
4757 W WASHINGTON BLVD LOS ANGELES, CA 90016

MAYER BROWN ROWE & MAW LLP
Attn: Safety Officer / Risk Management Office
190 SOUTH LA SALLE STREET CHICAGO, IL 60603

MIRAMAR SHERATON
Attn: Safety Officer / Risk Management Office
101 WILSHIRE BLVD SANTA MONICA, CA 90401

P & R PAPER SUPPLY CO
Attn: Safety Officer / Risk Management Office
1898 E COLTON AVENUE REDLANDS, CA 92374

PIONEER CHEMICAL CO
Attn: Safety Officer / Risk Management Office
13717 S NORMANDIE AVENUE GARDENA, CA 90249

POOL SUPPLY OF ORANGE COUNTY
Attn: Safety Officer / Risk Management Office
620 N. SANTIAGO STREET SANTA ANA, CA 92701

RAYVERN LIGHTING
Attn: Safety Officer / Risk Management Office
7901 SOMERSET   SUITE C PARAMOUNT, CA 90723

SACKS, ADAM MICHEAL
Attn: Safety Officer / Risk Management Office
4335 WILLOW GLEN STREET CALABASAS, CA 91302

SAMY'S CAMERA SHOP
Attn: Safety Officer / Risk Management Office
431 S. FAIRFAX AVE. LOS ANGELES, CA 90036

SANTA MONICA FENCE CO
Attn: Safety Officer / Risk Management Office
1547 16TH STREET SANTA MONICA, CA 90404

SANTA MONICA FORD
Attn: Safety Officer / Risk Management Office
1230 SANTA MONICA BLVD
SANTA MONICA, CA 90404

SANTA MONICA MUN BUS LINES
Attn: Safety Officer / Risk Management Office
612 COLORADO AVENUE SANTA MONICA, CA 90401

SANTA MONICA SCHOOL (#SDSMCU)
Attn: Safety Officer / Risk Management Office
1750 14TH STREET SANTA MONICA, CA 90401

SANTA MONICA WATER DIVISION
Attn: Safety Officer / Risk Management Office
1212 FIFTH ST., 3RD FLOOR SANTA MONICA, CA 90401

SCHOOL LINK TECHNOLOGIES INC
Attn: Safety Officer / Risk Management Office
SNAP SYSTEMS INC SANTA MONICA, CA 90407

SCHOOL SPECIALTY INC
Attn: Safety Officer / Risk Management Office
P.O. BOX 2046 MANHATTAN BEACH, CA 90267

SCIENCE KIT & BOREAL LABS
Attn: Safety Officer / Risk Management Office
777 E. PARK DRIVE TONAWANDA, NY 14150

SOUTHWEST SCHOOL SUPPLY
Attn: Safety Officer / Risk Management Office
805 N BARRINGTON AVENUE ONTARIO, CA 91764

SPECTRA/SHAW CONTRACT FLOORING
Attn: Safety Officer / Risk Management Office
16360 ROSCOE BLVD. SUITE #120 VAN NUYS, CA 91406

STAPLES DIRECT
Attn: Safety Officer / Risk Management Office
7910 KENTUCKY DRIVE FLORENCE, KY 41042

SVERDRUP CORPORATION
Attn: Safety Officer / Risk Management Office
PO BOX 18713 F ST LOUIS, MO 63150

THE GAS COMPANY
Attn: Safety Officer / Risk Management Office
P.O. BOX C MONTEREY PARK, CA 91756

W. W. GRAINGER
Attn: Safety Officer / Risk Management Office
10804 LA CIENGA BOULEVARD INGLEWOOD, CA 90304

WARREN DISTRIBUTING INC.
Attn: Safety Officer / Risk Management Office
8737 DICE ROAD SANTA FE SPRINGS, CA 90670

WEATHERPROOFING TECHNOLOGIES
Attn: Safety Officer / Risk Management Office
3735 GREEN ROAD   BEACHWOOD, CA 44122

WEINBERG, ROGER & ROSENFELD
Attn: Safety Officer / Risk Management Office
1605 W OLYMPIC BLVD STE 1023 LOS ANGELES, CA 90015

XEROX CORP/SUPPLIES
Attn: Safety Officer / Risk Management Office
1301 RIDGEVIEW, BLDG 300 LEWISVILLE, TX 75057

ZOLL MEDICAL CORPORATION
Attn: Safety Officer / Risk Management Office
269 MILL ROAD CHELMSFORD, MA 18240

ZONES BUS SOLUTIONS/MAC ZONE
Attn: Safety Officer / Risk Management Office
1102 15TH STREET SW AUBURN, WA 98001

DEPARTMENT OF TRANSPORTATION
Office of Public Affairs
100 S. Main Street Los Angeles, CA 90012

SANTA MONICA FIRE DEPARTMENT
Office of Public Affairs
333 Olympic Street Santa Monica, CA 90401

SANTA MONICA POLICE DEPARTMENT
Office of Public Affairs
333 Olympic Street Santa Monica, CA 90401

CALIFORNIA HIGHWAY PATROL
Office of Public Affairs
PO Box 942898Sacramento, CA 94298

ST. JOHN'S HEALTH CENTER
Public Relations
1328 22nd Street Santa Monica, CA 90404

LOS ANGELES COUNTY SHERIFF'S DEPARTMENT
Office of Public Affairs
207050 Agoura Road Calabasas, CA 91301

CHILDRENS CREATIVE WORKSHOP
Sherri Latte
6955 Frenhill Drive Malibu, CA 90265

J.E. CONSULTING
Office of Public Relations
3687 Victoria Ave Los Angeles, CA 90016

THE GROWING PLACE
Ellen Khokha
401 Ashland Place Santa Monica, CA 90404

MALIBU COMMUNITY CENTER
Office of Public Relations
6955 Frenhill Drive Malibu, CA 90265

MALIBU FOUNDATION FOR YOUTH & FAMILY
Office of Public Relations PO Box 6768 Malibu, CA 90264

YMCA
Office of Public Relations
625 S. New Hampshire Ave.
Los Angeles, CA 90005

ST. JOSEPH
Office of Public Relations
204 Hampton Dr
Venice, CA 90291

SMC's Stakeholder/Vendor List

Gary McGavin, AIA
Architecture Seismic Design Project Management
447 LaVerne Street
Redlands, CA 92373

Jonathan Lord
Keenan & Associates
2355 Crenshaw Blvd., Ste., 200
Torrance, CA 90501

American Red Cross
American Red Cross of Greater Los Angeles
2700 Wilshire Blvd.,
Los Angeles, CA 90057-3202

Community Outreach
Santa Monica-UCLA Medical Center
1250 16th Street
Santa Monica, CA 90404

Southern California Gas Company
Centralized Correspondence
P.O. Box 3150
San Dimas, CA 91773

Southern California Edison
Economic & Business Development
2244 Walnut Grove Ave
Rosemead, CA 91770

James T. Butts, Jr.
Chief of Police
Santa Monica Police Department
1685 Main Street
Santa Monica, CA 90401

Paul Weinberg, Emergency Service Center Coordinator
City of Santa Monica
1685 Main Street, Room 209
Santa Monica, CA 90401

Public Outreach Program

(example letter)
August 4, 2005

Department of Transportation
Office of Public Affairs
100 S. Main Street
Los Angeles, CA 90012

To Whom It May Concern:

The Santa Monica-Malibu USD & Santa Monica College is currently involved in writing a Disaster Hazard Mitigation Plan under the 2002 amendment to the Robert Stafford Act (PL 93-288) for reduction of damage from both natural and human-made caused risks that can affect our school district and college. Santa Monica-Malibu USD & Santa Monica College share common borders and/or interests with your jurisdiction/company and our jurisdiction may share some mutual corresponding risks, such as earthquake, flood, dam failure, wildland/urban interface fire, and other human-caused technology hazards.

We are inviting your comments and input into the Santa Monica-Malibu USD & Santa Monica College DMA 2000 Hazard Mitigation Plan. The Hazard Mitigation Planning Committee would/will consider projects or mitigation recommendation that you may want the School District/College to participate in for the reduction of risks between our two jurisdictions. Attached for you consideration is the list of Disaster Risk priorities in the order they were ranked by the Planning Committee and are being considered for mitigation strategies by the School District/College.

Cozetta Wilson-Carlton, is the Chairperson for the SMMUSD/SMC DMA 2000 Hazard Mitigation Planning Committee. The team will meet on April 15th at 10:30am in SMMUSD Administration Office at 1651 16th Street, Santa Monica, CA 90404. You are welcome to be our guest at a regular meeting or you may contact Cozetta Wilson-Carlton, Santa Monica College, at (310) 434-4493.

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

Sincerely,

Steven C. Wilmes, PHR

Risk Management Department: 1900 Pico Ave., Santa Monica, CA 90405: (310)313-4493

March 30, 2005

Paul Weinberg, Emergency Service Center Coordinator
City of Santa Monica
1685 Main Street, Room 209
Santa Monica, CA 90401

Dear City Manager,

RE: Santa Monica-Malibu USD & Santa Monica College DMA 2000 Hazard Mitigation Plan

The Santa Monica-Malibu USD (SMMUSD) & Santa Monica College (SMC) is currently involved in writing a Disaster Hazard Mitigation Plan under the 2002 amendment to the Robert Stafford Act (PL 93-288) for reduction of damage from both natural and man caused risks that can affect our school district and college. Santa Monica-Malibu USD & Santa Monica College share common borders and/or interests with your jurisdiction/company and our jurisdiction may share some mutual corresponding risks, such as earthquake, flood, dam failure, wildland/urban interface fire, and other human-caused technology hazards.

We are inviting your comments and input into the Santa Monica-Malibu USD & Santa Monica College DMA 2000 Hazard Mitigation Plan. The Hazard Mitigation Planning Committee would/will consider projects or mitigation recommendation that you may want the School District/College to participate in for the reduction of risks between our two jurisdictions. Attached for you consideration is the list of Disaster Risk priorities in the order they were ranked by the Planning Committee and are being considered for mitigation strategies by the School District/College.

Cozetta Wilson-Carlton, is the Chairperson for the SMMUSD/SMC DMA 2000 Hazard Mitigation Planning Committee. The team meets the 1st and 3rd Friday of each month in SMMUSD Administration Office at 10:30a.m. A special Vendor/Stakeholders Meeting will be held on April 15th, 10:30-12:30 at SMMUSD. You are welcome to be our guest at Vendor/Stakeholders Meeting or the regularly scheduled meetings. You may contact Cozetta Wilson-Carlton, Santa Monica College, at (310) 434-4493, to obtain more information.

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

Sincerely,

Cozetta Wilson-Carlton

SANTA MONICA-MALIBU USD UNIFIED SCHOOL DISTRICT PRESS RELEASE	
Contact: Steve Wilmes **310-450-8338, ext. 310**	**For Immediate Release:** **March 4, 2005**

SMMUSD Hazard Mitigation Planning

The Santa Monica-Malibu USD Unified School District is joining with Santa Monica College in a multi-jurisdictional, resources saving planning process to complete a Disaster Mitigation Plan (DMA 2000) in compliance with new Federal Regulations.

A Hazard Mitigation Plan is a pre-disaster plan outlining strategies and an implementation process that will lower the District's risk and exposure to a disaster. This plan relies on information supplied by the District's community members, students, teachers, vendors, and government agencies.

The School District invites you to take part in the Hazard Mitigation Planning Process by completing our Hazards Mitigation and Preparedness Questionnaire. You may access it on line at www.smmusd.org, click on District Information in the left-hand column, and then click on the box that says Hazard Mitigation Planning. If you would like a copy mailed to you, contact the Risk Management Office at 310-450-8338, ext. 310.

####

SANTA MONICA-MALIBU USD UNIFIED SCHOOL DISTRICT
1651 16TH Street, Santa Monica, CA 90404 - Tel: 310-450-8338 - Fax: 310-581-1138
www.smmusd.org

Santa Monica-Malibu Unified School District & Santa Monica College
Hazard Mitigation and Preparedness Questionnaire

This questionnaire is designed to help the SMMUSD/SMC DMA 2000 Hazard Mitigation Planning Committee by identifying the community's concerns about natural and human-caused hazards and to better understand community needs in reducing risk and loss from such hazards. The questionnaire should be completed by an adult, preferably the homeowner or the head of the household. Please, take a few moments to complete this questionnaire. All individual responses are strictly confidential, and are for research purposes only.

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

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

Natural:

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

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

Media:
- ☐ Newspaper
- ☐ Newspaper ads
- ☐ Television news
- ☐ Television ads
- ☐ Radio news
- ☐ Radio ads

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

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

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

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

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

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

☐ Yes ☐ No

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

☐ Yes ☐ No ☐ Don't know

8. Do you carry flood insurance? If so what is the annual cost? ☐Yes ☐ No __________

9. Would you be willing to make your home more resistant to natural disasters?
☐ Yes ☐ No

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

10a. Nonstructural
- ☐ Anchor bookcases, cabinets to wall
- ☐ Secure water heater to wall
- ☐ Install latches on drawers/cabinets
- ☐ Fit gas appliances with flexible connections
- ☐ Others (please explain)
- ☐ Others (please explain)
- ☐ None

10b. Structural
- ☐ Secure home to foundation
- ☐ Brace inside of cripple wall with sheathing
- ☐ Brace unreinforced chimney
- ☐ Brace unreinforced masonry and concrete walls and foundations

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

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

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

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

Mail to : SMMUSD / SMC
PO Box 446
Rio Vista, CA 94571

Survey Results

Number of Responses	**48**
1. Internet Access	
Yes	**2**
No	**0**
Own	**40**
Rent	**8**
2. Concerned About Disasters	
Flood	**0**
Levee Failure	**0**
High Winds	**1**
Dam Failure	**0**
Health Alert/Mass Disease	**1**
Landslides/Mudslides	**1**
Earthquake	**1**
Biological	**2**
Transportation Loss	**1**
Train Derailment	**2**
Fire	**2**
Telecommunications Failure	**1**
Radiological Incident	**1**
Special Events	**1**
Terrorism	**1**
Utilities Interruption	**0**
3. Most Effective Way to Receive Information	
Newspaper Stories	**34**
Newspaper Ads	**4**
Television News	**28**
Television Ads	**5**
Radio News	**28**
Radio Ads	**3**
Schools	**13**
Outdoor Advertising	**7**
Books	**8**
Mail	**27**
Fire Departments	**18**
Internet Access	**23**
Fact Sheet/Brochure	**21**
Church/Religious Organization	**10**
Employer	**8**
Public Meetings	**16**
University or Research Institution	**11**
Utility Bills	**9**

4. Planning Preparedness	Meetings	Talked	Family Plan	Supply Kit	First Aid/CPR
Have Done	**29**	**26**	**13**	**30**	**8**
Plan to do	**3**	**9**	**13**	**11**	**5**
Not done	**15**	**9**	**18**	**5**	**33**
Unable to do	**0**	**3**	**3**	**1**	**2**
No Response	**0**	**0**	**0**	**0**	**0**

5. Time willing to give to preparedness	
0-1 hr	**7**
2-3 hrs	**21**
4-7 hrs	**8**
8-15 hrs	**3**
16+ hrs	**3**
Other	**5**
No Response	**1**
6. Consider occurrence?	
Yes	**28**
No	**0**
7. Spend more money on a safe home?	
Yes	**2**
No	**0**
8. Carry Flood Insurance?	
Yes	**45**
No	**0**
9. Retrofit house?	
Yes	**12**
No	**0**
10. Home modifications made	
Non-structural - Anchor bookcases	**29**
Secure water heater	**35**
Install latches	**15**
Flexible gas connections	**25**
Other	**2**
None	**5**
Structural - Foundation	**13**
Brace inside of cripple wall	**15**
Brace unreinforced chimney	**10**
Brace unreinforced walls	**3**
None	**1**

11. How important is each?	Property	Critical Facilities	Development	Environment	Historical	Cooperation	Utilities	Emerg Svcs
Very Important	**40**	**46**	**29**	**29**	**16**	**32**	**37**	**35**
Somewhat Important	**6**	**1**	**9**	**12**	**19**	**10**	**9**	**7**
Neutral	**0**	**0**	**6**	**3**	**6**	**1**	**1**	**5**
Not Very Important	**2**	**1**	**3**	**3**	**5**	**1**	**0**	**0**
Not Important	**0**	**0**	**1**	**1**	**2**	**4**	**1**	**1**
No Response	**0**	**0**	**0**	**0**	**0**	**0**	**0**	

12. Strategy Opinions	Regulatory	Non-regulatory	Development. policies	Local tax	Historical	Willing-home	Post-disaster	School s
Agree		**20**	**26**	**26**	**22**	**34**	**38**	**39**
Neutral		**13**	**15**	**8**	**19**	**6**	**3**	**6**
Disagree		**7**	**5**	**8**	**6**	**3**	**4**	**2**
Not sure		**8**	**2**	**5**	**1**	**5**	**3**	**1**

Planning Process Meeting Minutes

February 4, 2005

Meeting Called to Order

First meeting of the Santa Monica Malibu Unified School District/ Santa Monica College DMA 2000 Hazard Mitigation Planning Committee called to order at 10:00am.

Members Present

Name	Title	Phone	Email
Gary Rose	Maintenance Director Facilities Department	310 434-4377	Rose_Gary@smc.edu
Tony Prestby	Coordinator Officer of Public Programs	310 434-4271	Prestby_Tony@smc.edu
Cozetta Wilson-Carlton	Risk Manager	310 434-4493	Wilson_Cozetta@smc.edu
David Muller	Assistant V.P. of Facilities	310 434-4144	Muller_David@smc.edu
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US
Rick Demuth	Assistant Director Facilities	310 450-8338	Demuth@smmusd.org
Michael Hill	Facilities Coordinator	450-8338 ext. 263	MHill@smmusd.org
Greg Brown	Director of Facilities Planning	310 434-4203	Brown_Gregory@smc.edu
Wally Berriman	SMMUSD Director of Facilities	310 450-8338	Berriman@smmusd.org
Winston Braham	Assistant Superintendent Fiscal Business Services & Chief Financial Officer	310 450-8338 Ext. 286	Winston.Braham@mail.smmusd.org
Theresa Hayes	Director of Operations Dimensions	626 286-8305	Theresa@dimensionsui.com
Kristel Arnott	Consultant Dimensions	626 286-8305	Kristel@dimensionsui.com

Introductions

DMA 2000 Overview

Theresa Hayes (Consultant) gave a 55-minute overview of the Hazard Mitigation Planning Process.

New Business

Committee

Name – DMA 2000 Hazard Mitigation Planning Committee
Chair - Cozetta Wilson-Carlton
Co Chair - Michael Hill

Data Needed

Reviewed the list of data needed to include in the Plan.

Risk Hazards

The Committee agreed to do a Multi-Hazard Plan
Risk Analysis Identification Matrix
Risk Assessments will be faxed or mailed to Dimensions by next Friday (February 11).

Public Input

Dimensions will provide a Press Release on the website.
The Press Release should explain the difference between the Mitigation Plan and the completed emergency plans to make sure that the Public understands that the Mitigation Plan is separate.
Questionnaires will be brought to the next meeting

Meeting Schedule:

Meetings will be held every first and third Friday of the month at 10:30am.

Next Meeting:

February 18, 2005 at 10:30am

Adjourn

Meeting Adjourned at 11:35 AM.

Santa Monica-Malibu Unified School District / Santa Monica College
DMA 2000 Hazard Mitigation Planning Committee

February 18, 2005

Meeting Called to Order

Second meeting of the Santa Monica-Malibu Unified School District/ Santa Monica College DMA 2000 Hazard Mitigation Planning Committee was called to order at 10:40am by Chair Wilson-Carlton.

Members Present

Name	Title	Phone	Email
David Muller	Assistant V.P. of Facilities	310 434-4144	Muller_David@smc.edu
Judy Neveau	Community Relations Director, SMC	310 434 4304	Neveau_Judy@smc.edu
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US
Cozetta Wilson-Carlton	Risk Manager	310 434-4493	Wilson_Cozetta@smc.edu
Michael Hill	Facilities Coordinator	450-8338 ext. 263	MHill@smmusd.org
Gary Rose	Maintenance Director Facilities Department	310 434-4377	Rose_Gary@smc.edu
Eileen Miller	Chief of Police	310 434-4302	Miller_Eileen@smc.edu
Greg Brown	Director of Facilities Planning	310 434-4203	Brown_Gregory@smc.edu
Marolyn Freedman	Coordinator of Pupil Services	310 450-8338	freedman@smmusd.org
Rick Demuth	Assistant Director Facilities	310 450-8338	Demuth@smmusd.org
Wally Berriman	SMMUSD Director of Facilities	310 450-8338	Berriman@smmusd.org
Theresa Hayes	Director of Operations Dimensions	626 286-8305	Theresa@dimensionsui.com
Kristel Arnott	Consultant Dimensions	626 286-8305	Kristel@dimensionsui.com

Introductions

Consideration of Meeting Minutes

February 4, 2005 Meeting Minutes were approved with as amended. Amended minutes with meeting schedule will be sent out to the Committee.

Santa Monica-Malibu Unified School District / Santa Monica College
DMA 2000 Hazard Mitigation Planning Committee

February 18, 2005

New Business

Bylaws, Tasks, Goals and Objectives for the Committee were proposed and adopted. They are:

Hazard Mitigation Planning Committee By-laws

1. The SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee was organized in February 2005.

2. Members of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee shall elect a chair/co-chair.

3. Members of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee agree to meet semi-monthly to identify hazard priorities and review, identify and implement the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE hazard mitigation strategy recommendations.

4. The SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee agrees to make and pass policy recommendations by a vote of a simple majority of those members present at the scheduled meeting.

5. Any single Hazard Mitigation Planning Committee member may request, at a scheduled meeting of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee as a whole, an adoption of, or amendment to the plan or process.

6. The SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee may form subcommittees to review and develop those feasible hazard mitigation strategy recommendations identified that will be reviewed by the Hazard Mitigation Planning Committee 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 departments, committees, commissions, private citizens and organizations.

8. The SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee will identify constraints to mitigation strategies that affect SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE's ability, authority and responsibility to implement those strategies.

9. Public Input will be implemented by direction of the Committee.

Santa Monica-Malibu Unified School District / Santa Monica College
DMA 2000 Hazard Mitigation Planning Committee

February 18, 2005

Hazard Mitigation Planning Tasks

1. Coordinate all-hazard mitigation planning tasks and activities with the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE administrative staff and departments to develop a multi-hazards disaster mitigation plan and support the Hazard Mitigation Planning Committee chair/co-chair's oversight of the planning process.
2. Review incorporation of existing plans, studies, reports and technical information.
3. Assist in carrying out the goals and objectives of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Plan in compliance with FEMA DMA 2000 Hazard Mitigation Act.
4. Prioritize risks for implementing mitigation strategies.
5. Select designated Critical Facilities owned by SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE and in proximity to SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE facilities, and develop a risk exposure analysis for those facilities.
6. Select highest priority and most-desired mitigation recommendations and develop those recommendations for further action by each member of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee.
7. Review mitigation planning drafts, recommendations and updates.
8. Develop and implement long- and short-term goals.
9. Integrate the plan with all phases of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE's Multi-hazard Functional Plan and Safety Element to the General Plan.
10. Provide for the implementation of Planning Committee decisions.
11. Encourage development of, coordinate and implement a methodology for the implementation of public input.
12. Establish Hazard Mitigation Planning Committee responsibilities.
13. Determine implementation ability and constraints for proposed Hazard Mitigation planning steps and development of strategies
14. Bring forward community concerns through private and public input
15. Identify implementation resources
16. Identify lead departments, commissions and committees for implementation of strategies

Santa Monica-Malibu Unified School District / Santa Monica College
DMA 2000 Hazard Mitigation Planning Committee

February 18, 2005

17. Provide for the update of the Disaster Mitigation Plan on a regularly scheduled basis
18. Evaluate and carry out mitigation activities, as feasible.
19. Assist in implementation of funding identification and procurement

Hazard Mitigation Planning Goals

1. Support the priorities of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE; its mandates, employees, students, citizens and the business community.
2. Promote economic development consistent with seismic, floodplain and risk management guidance as developed by the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE and its departments, committees and/or commissions.
3. Provide for an effective public awareness program for natural, human-caused and technological hazards present in the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE.
4. Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE.
5. Promote the recognition of the real value of hazard mitigation to public facilities, public safety and the welfare of all citizens of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE.
6. Support the mitigation efforts of local governments, private citizens, non-profit organizations, community-based organizations and private businesses throughout the city.

Hazard Mitigation Planning Objectives

1. Identify mitigation actions to reduce loss of lives and property.
2. Implement mitigation actions that are feasible, to reduce loss of lives and property.
3. Identify mitigation strategies that will allow the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE to perform its primary mission and goals.
4. Identify mitigation opportunities for short- and long-range planning considerations.

Santa Monica-Malibu Unified School District / Santa Monica College
DMA 2000 Hazard Mitigation Planning Committee

February 18, 2005

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

6. Identify lead SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Departments, Commissions and Committees that have an interest in mitigation of specific hazards.

7. Develop a standard mitigation program utilizing authorities, policies and programs of each SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Department, Commission and/or Committee.

8. Organize, train and maintain an effective and ongoing SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Hazard Mitigation Planning Committee that will facilitate implementation of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE All-Hazard Mitigation Plan.

9. Review and update other SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE programs to identify current and future mitigation goals and objectives in compliance with appropriate city, county, state and Federal requirements.

10. Gain support of the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE's administration for the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Multi-Hazard Mitigation Plan implementation.

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

12. Support and expand identified hazard mitigation strategies as set forth in the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE Safety Element to the SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE General Plan and all other SANTA MONICA-MALIBU USD/SANTA MONICA COLLEGE plans that contain Hazard Mitigation Strategies.

Public Participation:

Questionnaire

The two page questionnaire was reviewed and adopted by the Committee with one change; Santa Monica-Malibu USD/Santa Monica College DMA 2000 Hazard Mitigation Planning Committee will be added to the heading.
The Committee agreed to post the questionnaire on each agencies website in PDF format for a minimum of 30 days (March 1, 2005-April 1, 2005).
Dimensions will create the PDF and Word versions of the questionnaires to send to Michael Hill and Cozetta Wilson-Carlton.
Completed questionnaires will be mailed to and compiled by Dimensions.

The Committee discussed the cover letters to be sent with the Questionnaires. Steve Wilmes will develop the text for SMMUSD's cover page and will send to Dimensions. Cozetta Wilson-Carlton will develop the text for SMC's cover page and forward to Dimensions.

Santa Monica-Malibu Unified School District / Santa Monica College
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Stakeholders Input

The Committee will be provided with a sample of the Jurisdiction/Stakeholders letter and a list of suggested agencies for input. This will be sent out February 28 for review and comment at the next meeting.

Hazard Risk Analysis:

The Committee reviewed the results of the Hazard Risk Analysis and discussed the following risks:

Dam Failure

There are two dams that could affect the School District and Community College;

- Sullivan Canyon
- Santa Monica City Reservoir

A boundary map of the School District will be provided to determine which schools would be affected.

Civil Unrest: Civil Unrest was added to the Hazard Analysis as a Moderate Priority.

Based on the compiled results the Committee approved the Hazard Risk Priorities Matrix:

Low Risk: 0-0.99, Moderate Risk: 1-1.499, and High Risks: >1.5.

High Risk	Moderate Risk	Low Risk
Earthquake	Economic Disruption	Tsunami
Utility Loss	Water/Wastewater Disruption	Explosions
WMD/Terrorism	Severe Weather	Sinkholes
Data/Telecommunications Losses	Drought	Substations
Wildland/Urban Interface Fire	Transportation Accident, Incidents, Pipelines	Special Events
Winds	Biological/Health	Dam Failure
Aviation Disaster	Transportation Loss	Volcanic
	Floods	
	Civil Unrest/Disorder	

Documents Received:

- Signed Proposal from Santa Monica-Malibu Unified School District
- Santa Monica College District Site Statement of Values

Next Meeting:

March 4, 2005 at 10:30am in Santa Monica-Malibu USD's conference room.

Adjourn

Meeting Adjourned at 11:47 AM.

6

March 4, 2005

Meeting Called to Order

Third meeting of the Santa Monica-Malibu USD Unified School District/ Santa Monica College DMA 2000 Hazard Mitigation Planning Committee called to order at 10:30am.

Members Present

Name	Title	Phone	Email
Gary Rose	Maintenance Director Facilities Department	310 434-4377	Rose_Gary@smc.edu
Bob Dammer	Director of Network Services	310 434-4397	Dammer_bob@smc.edu
Eileen Miller	Chief of Police	310 434-4302	Miller_Eileen@smc.edu
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US
David Muller	Assistant V.P. of Facilities	310 434-4144	Muller_David@smc.edu
Judy Neveau	Community Relations Director, SMC	310 434 4304	Neveau_Judy@smc.edu
Michael Hill	Facilities Coordinator	450-8338 ext. 263	MHill@smmusd.org
Rick Demuth	Assistant Director Facilities	310 450-8338	Demuth@smmusd.org
Marolyn Freedman	Coordinator of Pupil Services	310 450-8338	freedman@smmusd.org
Greg Brown	Director of Facilities Planning	310 434-4203	Brown_Gregory@smc.edu
Cozetta Wilson-Carlton	Risk Manager	310 434-4493	Wilson_Cozetta@smc.edu
Wally Berriman	SMMUSD Director of Facilities	310 450-8338 ext. 325	Berriman@smmusd.org
Theresa Hayes	Director of Operations Dimensions	626 286-8305	Theresa@dimensionsui.com
Kristel Arnott	Consultant Dimensions	626 286-8305	Kristel@dimensionsui.com

Introductions

Consideration of Meeting Minutes

Greg Brown motioned to approve the February 18, 2005 Meeting Minutes, seconded by Steve Wilmes, and adopted by the committee.

New Business

Disaster History

The Committee discussed and will provide documentation for the following historical disasters:

Earthquake

- Santa Monica College has received approximately$75 million in FEMA recovery funds to repair damage caused by an earthquake in 1978.
- Wally Berriman will provide documentation on FEMA recovery projects caused by earthquake damage to SMMUSD.
- SMMUSD has completed retrofitting their buildings,
- Tie down measures in the SMMUSD facilities is a current and ongoing maintenance measure.

Severe Weather

The committee discussed the impact of the recent storms on the jurisdictions; Rain damage to buildings, potential for flooding, road closures caused by landslides (slope failure), and utility loss.
SMMUSD has not experienced any serious damage because of severe weather, but minor damage, such as mold, has affected four of their schools. The School District will look further into possible mitigation strategies to prevent further damage caused by severe weather.

Transportation Loss

If Pacific Coast Highway (PCH) was closed, it would have an economic affect on the College and School District. PCH was closed in January and February due to the recent rainstorms. The direct impact is students unable to attend classes.

Fire

In the past, smoke and the possible threat from approaching fires has affected the schools.

Flooding

The College had minor flooding in the Library and Science buildings.

Mitigation Strategies

The committee has identified and prioritized natural and human-caused disasters. After a round
table conversation concerning historical, current, and future impact/ vulnerability of the disasters to the school district and college, the committee members' brainstormed on possible mitigation strategies. Dimensions described the Project Form the Committee will use to generate and develop mitigation strategies. The Project Form template will be emailed to the committee members.

The Committee looked into the possibilities of developing a plan to assess classroom safety.

Data/Telecommunications:

It was agreed upon that a communication system with the Central Office and other schools should be upgraded. The radios work well site to site, but there are dead spots, i.e. Cabrillo Elementary and Malibu High School.

SEMS

Santa Monica College is updating their 2000 SEMS Manual to be finished next week. They are currently looking for new Emergency Operations Center (EOC) location.

The SMMUSD's EOC is located next to the District Office. The need for an alternate site was mentioned.
In the event of a disaster, the school district has earthquake supplies for 72 hours and 12 dedicated phone lines. Additional food and supplies is needed at some school sites. Although the SMMUSD conducts full-scale disaster drills yearly at every school site, the committee examined the possibility of staff training as a mitigation strategy.
Dimensions will produce a list of "outstanding" EOC upgrades based on the Los Angeles Unified School District. Steve Wilmes will also provide examples of possible EOC upgrades, such as out of state phone lines, and Priority Cards.
The Committee discussed the following items, and will elaborate further during the mitigation strategies subcommittee meeting:

- Barricades
- Evacuation Sites
- Reuniting Parents and Students
- Security Issues
- Special Needs Students
- Student Medication
- Open P.O.'s for emergency supplies

Aviation Disaster

SMMUSD and Santa Monica College are located in the flight patterns of the following airports:

- LAX
- Van Nuys
- Ontario
- John Wayne
- Hawthorne
- Long Beach
- Santa Monica

Further research will be made to determine the amount impact these airports would have on the School District and College in the event of a disaster.

Stakeholders/Vendors

Dimensions emailed a sample list of possible stakeholders, cities and department, and vendors the committee could consider sending the stakeholders/vendors letters to for public input. The committee will review the list, depend which are appropriate, and combine SMMUSD and SMC's list to eliminate redundancy. Steve Wilmes and Cozetta Wilson-Carlton will work together on the master list. Steve will produce the stakeholder/vendor invitational letter and mail next week. The letters will be printed on SMMUSD and SMC's letterhead. Stakeholders/Vendors will be invited to attend the April 1st meeting in SMMUSD's boardroom at 10:30am.

Identify Capital Projects

- Santa Monica College will e-mail Dimensions their capital projects.
- The School District does not have any capital projects at this time. But will share past mitigation projects for the plan.

Modernization Projects

SMMSUD recently completed their modernization projects. Most of the improvements were made to the structures bringing the School's buildings up to code. Wally Berriman will provide more information on the projects as well as FEMA Recovery Claims to include in the Hazard Mitigation Plan.

Documents Received:

- SMMUSD/SMC Hazard Mitigation Press Release and Questionnaire from the Website
- SMC Facilities Documents: List of Assets
- SMC Five Year Construction Plan 2006/7-2010-11
- SMC Building Summary Report Space Inventory Report 2004-05
- SMC Facilities Update December 1,2003
- Building Pictures from SMMUSD
- CSSP
- SMMUSD SEMS Plan (Dimensions will return at the next meeting)
- Appraisal information with updated replacement values from SMMUSD
- Santa Monica College is updating their appraisal and would like to have a statement in the Plan noting this.

Next Meeting:

March 18, 2005 at 10:30am in the Santa Monica-Malibu USD Unified School District board

conference room.

SMMUSD has set up April 6 2005 as the provisional date for the Mitigation Strategies Subcommittee Meeting in the board conference room. The time of the meeting is to be announced.
The Santa Monica College will announce the date they would like to set up their subcommittee meeting after Spring Break.

Adjourn Greg Brown motioned to adjourn the meeting at 11:40 AM, seconded by Steve Wilmes, all approved.

April 1, 2005

Meeting Called to Order

Fifth meeting of the Santa Monica-Malibu USD Unified School District/ Santa Monica College DMA 2000 Hazard Mitigation Planning Committee called to order at 10:32am.

Members Present

Name	Title	Phone	Email
Cozetta Wilson-Carlton	Risk Manager	310 434-4493	Wilson_Cozetta@smc.edu
Winston Braham	Assistant Superintendent Fiscal, Business Services & Chief Financial Officer	310 450-8338 Ext. 269	Winston.Braham@mail.smmusd.org
Gary Rose	Maintenance Director Facilities Department	310 434-4277	Rose_Gary@smc.edu
David Muller	Assistant V.P. of Facilities	310 434-4144	Muller_David@smc.edu
Rick Demuth	Assistant Director Facilities	310 450-8338	Demuth@smmusd.org
Greg Brown	Director of Facilities Planning	310 434-4203	Brown_Gregory@smc.edu
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US
Michael Hill	Facilities	310 450-8338	MHill@smmusd.org
Theresa Hayes	Director of Operations Dimensions	626 286-8305	Theresa@dimensionsui.com
Kristel Arnott	Consultant Dimensions	626 286-8305	kristel@dimensionsui.com

Consideration of Meeting Minutes

The March 18, 2005 meeting minutes were adopted with no corrections.

Old Business

Jurisdiction/Stakeholder Letters

Stakeholders will be invited to attend the Friday, April 15, 2005 meeting from 10:30-12pm in the Santa Monica-Malibu USD Unified School District Boardroom

SMMUSD currently has a list of 199 vendors that Steve Wilmes and Michael Bishop will review and send out letters.

Santa Monica Community College has gathered a list eight vendors to send their stakeholder letters too.

Dimensions suggested Committee consider sending letters to the following Stakeholders:

- Santa Monica Police, James T. Butts, Jr.
- Architecture Seismic Design Project Management
- Red Cross of Los Angeles
- Southern California Gas Company – Centralized Correspondence San Dimas, CA
- City of Santa Monica Emergency Services, Paul Weinberg
- Jonathan Lord Keenan & Associates
- Santa Monica, UCLA Medical Center Community Outreach
- Southern California Edison – Economic & Business Development

Outstanding Documents for List

The Committee will develop a table of past FEMA claims, including potential dollar losses and DSR's.

Faxed copies of the School Districts modernization were unclear; Steve will provide Dimensions with the manual containing color copies.

Critical Facility List

The Committee reviewed their current Critical Facilities list. No other facilities were added to the list, and will e-mail if there are any more additions.

Public Input – Questionnaire Update

Dimensions shared the current results of the 23 questionnaires gathered.

Public Hearing

Winston Braham will put a Public Hearing on the docket in which Dimensions will provide a 15-minute presentation on DMA 2000.

<u>New Business</u>

The Committee talked about the September 2004 Senate Bill and its connection to Mitigation Strategies.

In the event of an emergency, the School Distinct has food bins that will last 72hours. The Community College has a policy for students to stay on site in emergencies and a waiver for students under the age of 18 to sign. Documentation will be provided.

The School Districts SEMS Manual contains information regarding the location of morgues, and the role of Los Angeles Coroners Office in emergencies.

Capability Assessment Form

A Capabilities Assessment form from each jurisdiction will be included in the Plan. The form provided by Dimensions can be altered to fit the individual needs of the School District and Community College.

Review FEMA Crosswalk

The Committee reviewed the LHMP Review Crosswalk and discussed the requirements and information needed to fulfill each section.

Courtesy Review

It was decided by the Committee to send the Plan in for a Courtesy Review before presenting it to the Board for Formal adoption. A point of contact from the Committee will also be set up.

Documents Received:

Budget Information
Evacuation Plan Map – Community College

Adjourn

The meeting was adjourned at 11:55am.

April 15, 2005

Meeting Called to Order

Sixth meeting of the Santa Monica-Malibu USD Unified School District/ Santa Monica College DMA 2000 Hazard Mitigation Planning Committee called to order at 10:30am.

Members Present

Name	Title	Phone	Email
Armando Clemente	CHP Public Affairs	818 240-8200 213 703-3366	Aclemente@CHP.Ca.gov
Steve Nyblom	Asst. Div. Chief	213 351-5357	Snyblom@cao.co.la.ca.us
Cozetta Wilson-Carlton	SMC Risk Manager	310434-4493	Wilson_Cozetta@smc.edu
Michael Hill	Facilities Coordinator	310 450-8338	MHill@smmusd.org
Eileen Miller	SMC Ch. Of Police	310 434-4302	Miller_Eileen@smc.edu
David Muller	Assist. V.P of Facilities	310434-4144	Muller_David@smc.edu
Wally Berriman	Director of Facilities	310 450-8338	Berriman@smmusd.org
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US

Introductions

Consideration of April 1st, Meeting Minutes: Adopted with no changes

New Business

Dimensions gave a brief overview of DMA 2000 for the Stakeholders.
Armando Clemente described the role of California Highway Patrol in the event of a disaster.
He explained that mutual aid with the LAPD is standard protocol, and provided recommendations for the following to the Committee, which they may consider in their LHMP:

Command Post
Levels of Authority, who and how they are prioritized – Chief of Police oversees

Current mitigation strategies, as well as future, with regard to civil unrest/disorder and terrorism.
Transportation:
- Train bus drivers in first aid and CPR
- GPS
- Establish a designated relay communication system on the buses for the CHP and Sheriff's Department.
- Palm Pilots on buses that will relay traffic incidents, road closures and provide evacuation routes.

HazMat:
- Train staff to use equipment and identify possible hazardous Materials.
- Fire Department offers training as well as manual in HazMat.
- The Committee looked at possible options if they were to lose their school buses and considered the Municipal Bus Line in the event of a disaster.

Terrorism:
- Chief Butts, or Lt. Frank Fabrega was recommended as contacts regarding Terrorism and Homeland Security.

Economic Impact:
- The Committee explored different possibilities if students were unable to attend class and how to protect the schools from an economic loss.
- Open offsite places, such as office space, for education.
- Possible constraint that has to be addressed.
- Reevaluate resources and Insurance Options.

Although the CHP has jurisdiction, they will not draw resources away from the School District or College and respects the needs of each jurisdiction.

Services provided by the CHP:
- Security
- Highly trained paramedics
- Rescue Operations
- Officers trained in HazMat
- Courses and Presentations to the Schools and Public i.e. “Every 15 Minute Program”.

The Committee discussed what could be done to encourage staff and students to evacuate in an organized manner. Education was suggested as the most beneficial way to prevent a “mob mentality” during evacuation.

A key mitigation strategy is to keep networks active and build relationships through participating in tabletop exercises, meetings, designating staff for training and inviting local jurisdictions to speak.

Captain Calvin Aubrey, Westlake CHP, is the main point of contact for Santa Monica and Malibu:

Mitigation Strategies Meeting:

The SMMUSD currently has 68 mitigation strategies, and will have more by April 25, 2005. SMC will set up another mitigation strategy meeting.

Insurance policies and leases were discussed with the following suggestions from Steve Nyblom, Los Angeles County Chief Administrative Office:

- Contact ventures
- Find ways to structure requirement
- Lease out facilities
- Goal should be to review and update insurance policies.
- The Community College has a lease with the airport.

Section 6:
Dimensions provided a sample document for Section 6 of their Plan. The Committee will make the necessary corrections electronically and send them to Dimensions who will then reformat and e-mail back by the next meeting.

Documents Received:
- Appraisal and picture-SMMUSD
- DSR Summary with dollar values – SMMUSD
- School Addresses - SMMUSD

Next Meeting: May 6, 2005 at 10:30am
Adjourn: The meeting was adjourned at 12:35pm.

May 6,2005

Meeting Called to Order

Seventh meeting of the Santa Monica-Malibu USD Unified School District/ Santa Monica College DMA 2000 Hazard Mitigation Planning Committee called to order at 10:35am.

Members Present

Name	Title	Phone	Email
Michael Hill	Facilities Coordinator	310 450-8338	MHill@smmusd.org
Eileen Miller	SMC Ch. Of Police	310 434-4302	Miller_Eileen@smc.edu
David Muller	Assist. V.P of Facilities	310 434-4144	Muller_David@smc.edu
Wally Berriman	Director of Facilities	310 450-8338	Berriman@smmusd.org
Steve Wilmes	Risk Management Specialist	310 863-8651	Wilmes@ASCIP.K12.CA.US
Gary Rose	Maintenance Director Facilities Dept	310 434-4377	Rose_Rose@smc.edu
Rick Demuth	Asst. Director Facilities	310 450-8338	Demuth@smmusd.org
Marolyn Freedman	Coordinator of Pupil Services	310 450-8338	freedman@smmusd.org
Greg Brown	Director Facilities Planning	310 434-4203	Brown_Gregory@smc.edu
Theresa Hayes	Dimensions Unlimited	707 374-6529	Theresa@dimensionsui.com

Consideration of April 15th Meeting Minutes: Adopted with no changes

Old Business

Section 5 Mitigation Strategies

SMMUSD is finalizing their mitigation strategies. The strategies will be sent to Theresa by Friday, May 13th. No other strategies were developed outside the two mitigation strategy meetings.

SMC is gathering mitigation strategies from their departments. Their strategies will be completed and sent to Theresa as well.

Section 6 Future Actions & Goals

The committee reviewed Section 6 and made suggestions/corrections. Any other corrections, additions, or amendments will be done on an individual basis and forwarded to Theresa.

Section 7 Plan Maintenance

SMMUSD and SMC voted to designate the Risk Management Office with the responsible of monitoring the overall Plan for updates on an annual basis.

Public Presentation

Details of the DMA 2000 Plan overview PowerPoint Presentation were finalized concerning content and time for the May 19, 2005 SMMUSD School Board Meeting. The presentation will cover the DMA 2000 Act, process, and benefits. The time for the presentation is 10 minutes with 5 minutes for questions and answer period.

New Business

Plan Timeline

SMMUSD will present the DMA 2000 Plan to their School Board for Final Adoption in June.
SMC will present the DMA 2000 Plan to their School Board for Final Adoption in July.

This is contingent on all pertinent information gathered within the designated time frame. The depth and comprehensiveness of the Plan is paramount over a shorten timeframe.

Theresa will advise the committee by May 13th, if there will be a May 19th meeting. At this time, the committee has discussed, reviewed, and voted on all decisions concerning the contents of the Plan. The committee will reconvene when a draft is completed for their review.

Adjourned: The meeting was adjourned at 11:18am.

Section 3 – Demographics & Statistics

Santa Monica-Malibu Unified School District

History

The Santa Monica-Malibu Unified School District is located along the coast of Southern California and contains within its boundaries the municipalities of Santa Monica, Malibu and parts of Los Angeles County. This diverse district is made up of sixteen schools. Programs serve pre-school children to adults. The District has an acceptable use policy governing the use of all on-line systems.

As a community of learners the Santa Monica-Malibu Unified School District works together in a nurturing environment to help students be visionary, versatile thinkers; resourceful, life-long learners; effective, multi-lingual communicators and global citizens. We are a richly varied community that values the contributions of all its members. We exist to prepare *all* students in their pursuit of academic achievement and personal health and to support and encourage them in their development of intellectual, artistic, technological, physical, and social expression.
Adopted September 9, 1997

School Site Addresses

Juan Cabrillo Elementary School
30237 Morningview Drive
Malibu, CA 90265

Edison Elementary School
2425 Kansas Avenue
Santa Monica, CA 90404

Franklin Elementary School
2400 Montana Avenue
Santa Monica, CA 90403

Grant Elementary School
2400 Pearl Street
Santa Monica, CA 90404

McKinley Elementary School
2401 Santa Monica Boulevard
Santa Monica, CA 90404

Muir Elementary School

Santa Monica Alternative School House
2802 4th Street
Santa Monica, CA 90405

John Adams Middle School
2425 16th Street
Santa Monica, CA 90405

Lincoln High School
1501 California Street
Santa Monica, CA 90403

Malibu High School
30215 Morningview Drive
Malibu, CA 90265

Santa Monica High School
601 Pico Boulevard
Santa Monica, CA 90405

Olympic High School)

721 Ocean Park Boulevard
Santa Monica, CA 90405

Will Rogers Elementary School
2401 14th Street
Santa Monica, CA 90405

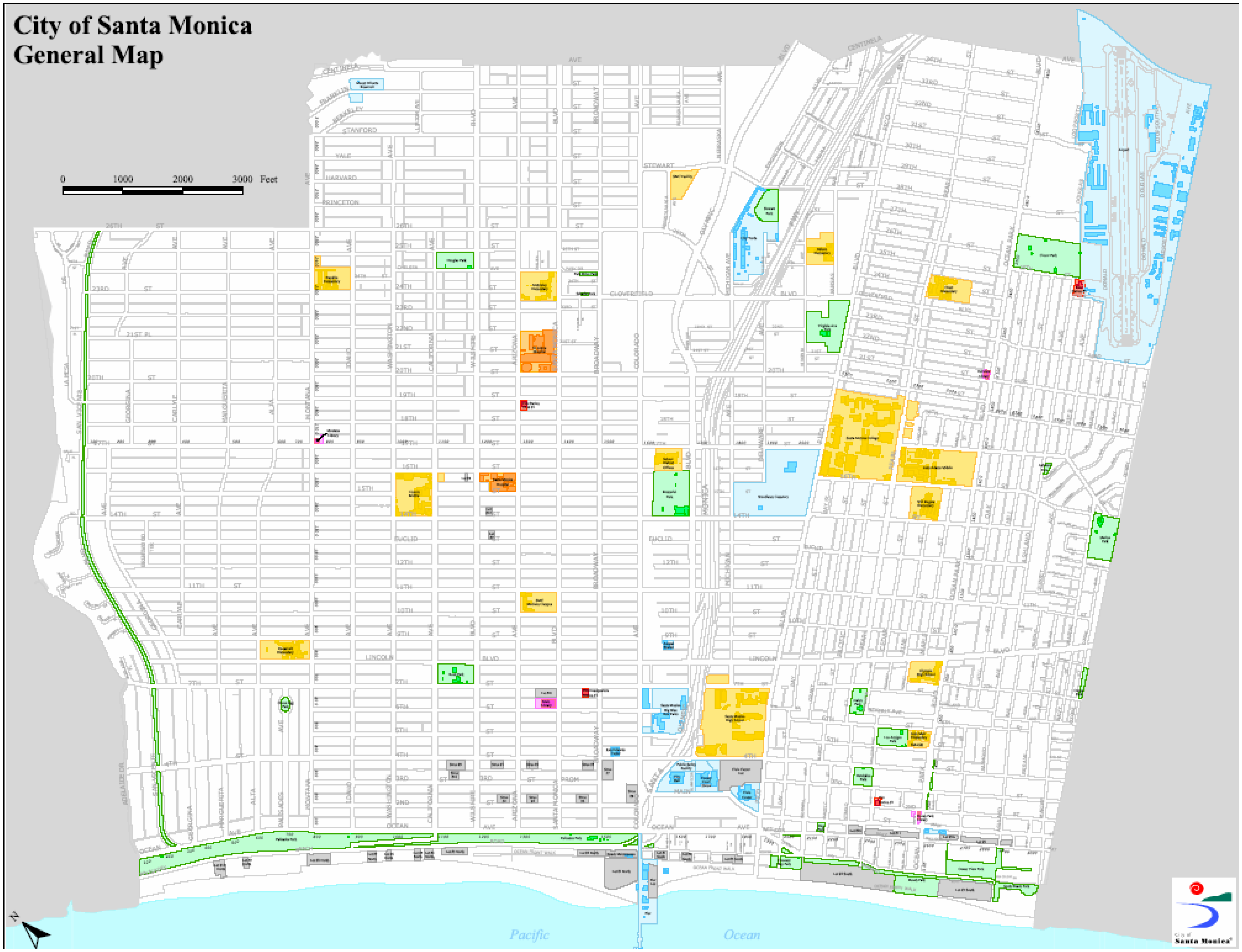
Roosevelt Elementary School
801 Montana Avenue
Santa Monica, CA 90403

Webster Elementary School
3602 Winter Canyon
Malibu, CA 90265

Point Dume Marine Science Elementary
6955 Fernhill Drive
Malibu, CA 90265

721 Ocean Park Blvd
Santa Monica, CA 90405

District Offices
1651 16th Street
Santa Monica, CA 90404


City of Santa Monica
General Map
0 1000 2000 3000 Feet
Pacific
Ocean


Malibu Vista
Malibu Hills
El Nido
Santa Monica
Mts National
Rec Area
Malibu West
Trancas
Paradise Cove Mobile Home Park
Point Dume Mobile Home Park
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Pacific
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1.5 km
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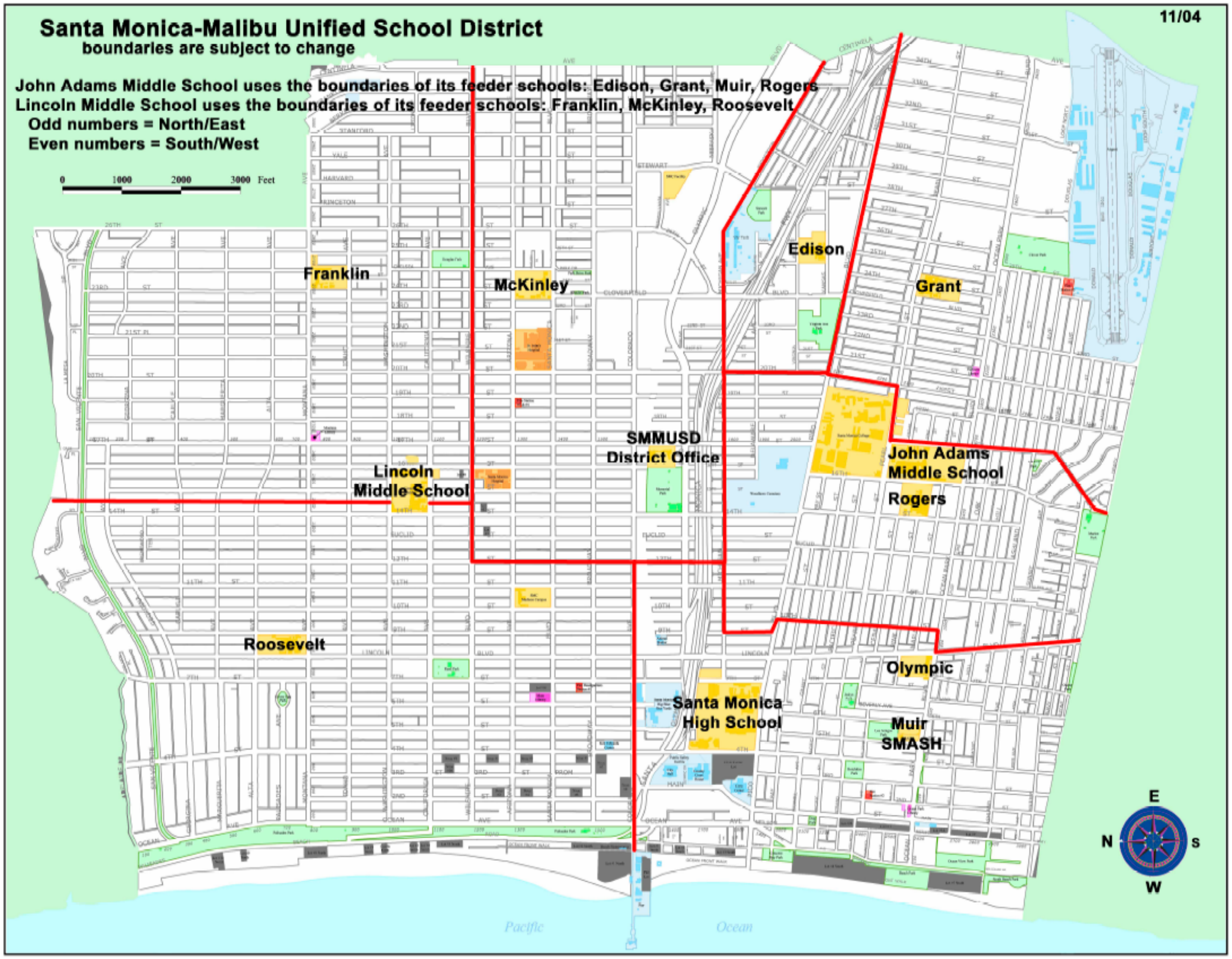
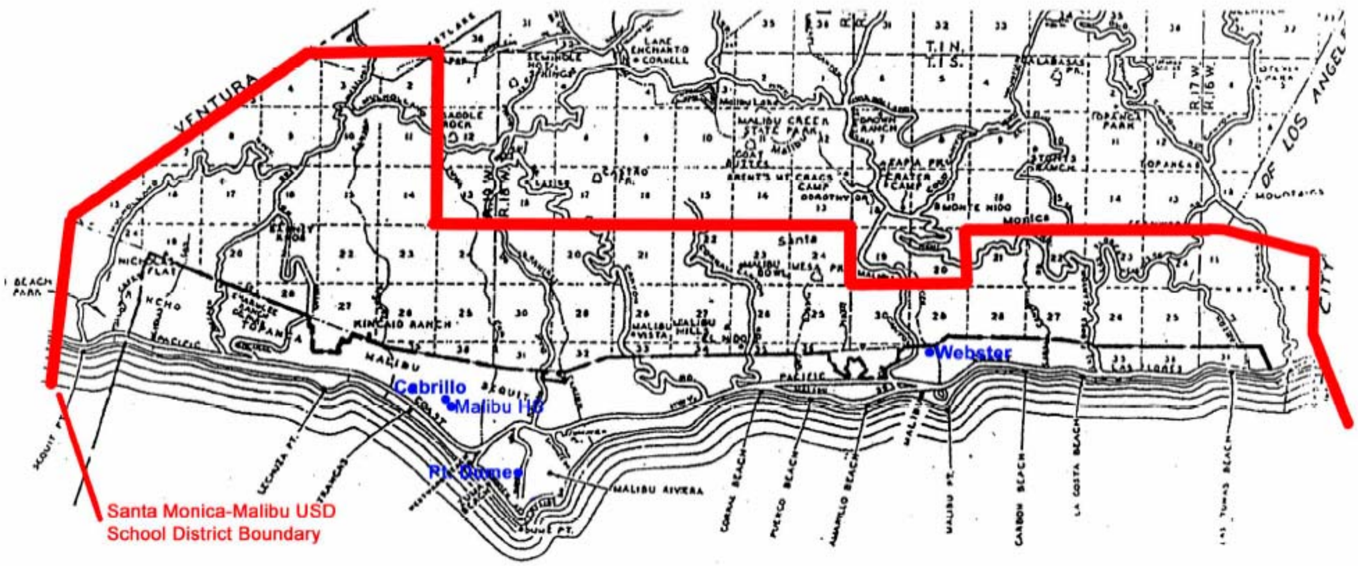
© 2004 Navteq


Santa Monica-Malibu Unified School District
boundaries are subject to change
11/04
John Adams Middle School uses the boundaries of its feeder schools: Edison, Grant, Muir, Rogers
Lincoln Middle School uses the boundaries of its feeder schools: Franklin, McKinley, Roosevelt
Odd numbers = North/East
Even numbers = South/West
0 1000 2000 3000 Feet
Franklin
McKinley
Edison
Grant
SMMUSD
District Office
Lincoln
Middle School
John Adams
Middle School
Rogers
Roosevelt
Olympic
Santa Monica
High School
Muir
SMASH
E
N
S
W
Pacific
Ocean

12/04

Boundary between Cabrillo and Webster Elementary Schools
Students living east of Zumirez Drive NOT including Zuma View, and extending eastward to the Los Angeles County line attend Webster Elementary
Students living west of Zumirez Drive including both sides of Zumirez Drive and Zuma View, and extending westward to the Ventura County line will attend Cabrillo Elementary

Point Dume Marine Science Elementary School Boundaries
WESTERN: Following Westward Beach Road southwest from PCH to the Ocean
EASTERN: Following Ramirez Cyn. Road south from PCH to the Ocean
NORTHERN: Southern side (even addresses) of Pacific Coast Highway between Westward Beach Road (WEST) and Ramirez Cyn. Road (EAST)
SOUTHERN: Pacific Ocean between the WESTERN and EASTERN boundaries as described above



Juan Cabrillo Elementary School

"They raise themselves above the elements in which they live"

William Shakespeare

A message from our Principal - John Davis

Welcome to Juan Cabrillo Elementary School. The moment you walk onto our campus, you will feel the welcoming attitude and family atmosphere that gives our school that old time "family feel" that so many people are looking for these days. We provide a safe and caring environment for all of our students in a school that emphasizes the academics and the fine arts as well. Our test scores are impressive and among the highest in the state, but we are much more than our test scores. This is a school that puts children first; we do this through careful staff and grade level planning as well as personal commitment on the part of every adult on our campus. We use State Standards to guide and direct our academic program while infusing it with tremendous care and compassion from all of the employees and volunteers at our school. In addition to exceptionally high academic standards, the children at Cabrillo demonstrate:

· Outstanding literacy in language arts as well as in technology

· Impressive care and concern for their classmates, positive self-esteem, self-discipline, and a positive attitude about themselves and school.

· Creative problem solving skills, higher level thinking skills, and creativity in all aspects of the school curriculum.

We are the dolphins, and we welcome each and every one of you to our school and look forward to sharing our "Dolphin Pride" with you. The dolphins of Cabrillo, as William Shakespeare wrote, "raise their backs above the element in which they live." Indeed this is a special place with special children taught by a special staff.

Edison Elementary School

Edison History In 1985 the Santa Monica-Malibu Unified School District created the Edison Instructional Program Task Force including Edison staff, parents, community representatives, and outside educational professionals to consider options for the school's future. During an intensive 18-month process of discussion and research, the task force designed a program, which incorporated the high proportion of Spanish dominant neighborhood children as an asset.

The task force recommended that Edison become a Spanish language two-way immersion program. The language immersion model evolved from studies of language acquisition in children that showed that the most effective way to learn a language is by being immersed in it. The program was designed, developed, and implemented with he guidance of Dr. Russ Campbell, the head of UCLA's Center for Language Education and Research (CLEAR). They proposed a model in which the school would be composed of approximately equal numbers of English dominant and Spanish dominant children, each of whom would have the opportunity to become fluent in both languages in diverse, supportive learning environment. In April 1986, the Santa Monica-Malibu Unified School District gave it approval and created the Edison Immersion Program, the name was later changed to the Edison Language Academy and designated the school as a magnet allowing both inter-and intra-district transfers of students to maintain the optimal language balance. The program expanded one grade each year and in 1994, the entire school converted to the immersion program.

Since that time, the school has grown and excelled. In 1990, the federal government recognized Edison as a model program. The Santa Monica-Malibu Unified School District has also continued to support Edison graduates in the full development of their language skills. The immersion program is offered at both John Adams Middle School and Santa Monica High School as a track, so that Edison students have the opportunity of participating in a K-12 Spanish-English immersion experience.

In 1998, the Edison Immersion program became a charter school and changed its name to The Edison Language Academy Charter School. By being a charter school, the immersion program was protected from the aftermath of Proposition 227, which prohibits the instruction of any other language besides English to children under 10 years of age.

Franklin Elementary School

Franklin Elementary School is located in a residential area of Santa Monica on the south side of Montana Avenue between 25th Street (on the east) 23rd Street (west), and Idaho Avenue (to the south) and Montana Avenue (north).

Principal: Patricia Samarge
Assistant Principal: Barry Yates
Teachers: 38 teachers plus specialists

Kindergarten-5th grade
2000/2001 Enrollment Counts

Grant Elementary School

Grant Elementary School is unique -- in terms of family income and ethnic diversity, Grant students represent an almost exact mirror of the greater Los Angeles area. Grant is **a living social laboratory** that is producing high-achieving and well-balanced lifelong learners. It is truly a community school that includes all students, all parents, and the surrounding neighborhood in the educational process. We have found positive ways to work together to effect change.

Grant is a school that is growing, too -- both physically and educationally. Six years ago, we had 21 teachers, today we number 38! Our enrollment is over 700 students and we have waiting lists in several grade levels.

What else makes Grant special? The kids, of course!

Teaching Staff It is no exaggeration to say that Grant has one of the finest teaching staffs anywhere in the district. Teachers in the SMMUSD meet tougher qualifications and are held to higher standards than those of area private schools. We offer specialists in art, music, dance, ceramics and drama, instrumental music, and technology.

McKinley Elementary

McKinley Elementary is a beautiful, mission style, urban, pre-K-5 school in Santa Monica, with approximately 500 students.

We are situated a few miles from the beach on a main street in the center of the city. This affords us the opportunity to make regular use of public transportation in order to access the abundant community resources.

Our current ethnic breakdown is: 6% Asian, 40% Hispanic, 10% African American, 42% Caucasian, and 2% Other.

We have a variety of Special Education programs throughout the grade levels as well as specialized reading and language programs. There are twenty students in each pre-K-3rd classroom and up to 31 in grades 4 and 5.

Mission:

To know each student and family well, and create a safe, nurturing physical and emotional environment.

Vision:

To promote maximum student development in all areas for all learners. PRIDE is our motto: Peaceful, Respectful, Intelligent, Diverse, And Enthusiastic

John Muir School

"Exciting" is the word often used to describe learning at John Muir Elementary School. We know that when students are excited about learning, they will read more, write more, and want to know more about the world around them. At John Muir's new, state-of-the-art campus, children quickly become active and enthusiastic participants in their own education. It is hard not to! The campus is a sunny, inviting space with spacious, light-filled classrooms. Our fully equipped technology centers spark students' imagination and help them become proficient in the technology that brings the world to their fingertips. In every grade form K-5, students discover people, places, subjects, and that inspire them to learn reading, writing, math, science, social studies, art, and music.

The staff at John Muir has high but appropriate expectations for every student. Realizing that children bring different strengths to the classroom, the teachers strive to make their lessons academically challenging for all. They take a child-centered approach in which the pace of leaning is adapted to each child's abilities and needs. Dedicated to knowing each child personally, our highly competent teachers emphasize creative, interactive, and rigorous learning to fully engage their students in the educational process. Embracing the rich diversity of the student body, teachers value and respect each of their pupils. They develop lessons that are relevant to the students' own experiences.

SCHOOL MISSION STATEMENT

The John Muir community works together to provide a safe, supportive learning environment for all children to become confident, self-directed learners who make positive contributions to society

Roosevelt Elementary School

Our Mission

Roosevelt School is a richly diverse community of learners that values the contributions of all it's members. In an environment of teamwork, caring, trust, and respect, we provide the highest quality of education possible. Our aim is to empower students by facilitating the acquisition of knowledge, improving skills, and developing character so that they may lead quality lives and contribute to society. We promote visionary, versatile thinking and enthusiastic, lifelong learning. We appreciate the uniqueness of each student and set high expectations for all. We welcome parent and community members as partners in the educational process.

Webster Elementary School

WEBSTER'S GREAT EXPECTATIONS

1) We will show respect to all other children.

2) We will play safely and be careful not to hurt others or ourselves.

3) We understand that fighting, name-calling, and bad language are never allowed.

4) We will protect and care for our buildings, grounds, supplies, and equipment.

5) We will be in the right place at the right time, at recess, lunch, P.E., and at all other times.

6) We will wait our turn, and allow everyone to play in our games.

7) We will walk quietly from place to place so that no one else is disturbed.

8) We will stop playing when the bell rings, and sit quietly in the line-up area.

9) We will be a polite and respectful audience at all assemblies.

10) We will remember that school is a place where every student has the right to work, play, and learn in peace.

PERFORMANCE OUTCOME FOR ALL STUDENTS

In each grade, every child is expected to have made progress appropriate for that child's developmental ability in each of the areas described below. At least one benchmark project will be assigned in each grade that will provide an opportunity for each child to demonstrate his/her level of competence in several areas.

Will Rogers School

In the spring of 1997, Will Rogers was selected as a national Blue Ribbon School of Excellence. In order to be selected as a Blue Ribbon School, we had to demonstrate excellence in the following categories: student focus and support, challenging standards and curriculum, teaching and active learning, learning-centered school context, professional growth and collaboration, and leadership and organizational vitality. With this award, Will Rogers enters the company of other schools throughout the United States that have worked hard to ensure the success of their students. This award is truly a credit to the dedicated professionals who make up the staff at Will Rogers.

Point Dume Marine Science School
Chi Kim, Principal kim@smmusd.org
6955 Fernhill Drive Malibu, CA 90265 Office 310.457.9370 Fax 310.457.8064

Dear Parents,

The goal of our School Discipline Plan is to teach each child self-respect, self-control, respect for others and positive social interactions. We believe that each child should feel safe, secure, happy and have a maximum opportunity to learn in a positive environment. We focus on three things that students should be in order to maintain a wonderful learning environment for us all.

Be Kind Be Safe Be Responsible

While each teacher has a classroom behavior management system, the purpose of this communication is to explain our general school rules. As one student pointed out, "Actually, Ms. Kim, there are more than 3 rules, but I get what you are trying to do." As you read through the list, each one can be covered under one of the three statements. Good behavior doesn't "just happen" by itself. We need your support. An effective discipline program is the result of parents, teachers and students working together.

I am asking that you carefully go over the attached materials with your child and see which one of the three Great Expectations each rule or standard falls under. Some rules are very specific, while others are general. If behavior issues arise, the teacher will address them in class. If an infraction merits a student be sent to my office, you will be notified by note or by phone to keep you informed and solicit your help at home. As stated in the Santa Monica-Malibu Unified School District Board Policies and Education Code, severe infractions require specific disciplinary action (these were included in the first week packet). If we all choose to Be Kind, Be Safe, and Be Responsible citizens, then we can continue to learn in a community that builds respect for self, for others, and responsibility for one's actions.

Sincerely,

Chi Kim
Principal

PLEASE DETACH, SIGN AND RETURN THIS SLIP TO SCHOOL. KEEP ATTACHED MATERIALS FOR FUTURE REFERENCE.

My child and I have reviewed the Five Q's, and Rules and Behavior Standards. We will do our best to help ensure a positive and safe learning environment by following the school rules and standards for safety.

______________________________ ____________________
Signature of Parent / Guardian Date

______________________________ ____________________
Signature of Child Teacher Grade

John Adams Middle School

"What You Are To Be You Are Now Becoming"

Principal's Message & endash; March 2005

There are many exciting things happening at John Adams Middle School. Congratulations to the members of our Quikscience Challenge Team who became one of two teams to earn a spot on the internationally renowned marine biology research vessel to Baja or Catalina. Their work, under the direction of Ms. Steinmetz, represents many hours completing research and developing a portfolio. The GEMS program recognizes students of African-American decent for their achievement in academics, the arts, athletics, and community service. Our music students are preparing for Stairway to the Stairs. Mr. Bui, our school librarian, is coordinating a medical outreach effort to people affected by the tsunami in Indonesia. He will become a John Adams' ambassador, sharing with the Indonesian people the resources raised by our student body. In addition, eighth grade students are completing their community service hours and preparing for their exit interviews, both requirements to participate in the promotion ceremony that reflects our deeply held belief that John Adams Middle School's commitment extends beyond the academic to include citizenship and people of character.

The work of our students and our staff represents the best of John Adams Middle School and I am proud of all their efforts and commitment to excellence.

And yet, I realize that we need to do a better job creating connections between content areas, between home and school, and within our community. Learning is maximized when the adults coordinate learning experience and make connections between concepts for students. Parents are pivotal in student learning, creating a foundation for student learning and supporting extended learning beyond the school day. Outside agencies provide experiences that help develop students' academic, socio-emotional, and physical well-being through the arts, athletics, activities, and special events. Through these partnerships we can ensure all students will achieve and be fulfilled in maximizing their skills. In order to accomplish this, we must sustain relationships to support each other's work.

This fall, our school staff, working with our parent groups, developed a blueprint to design our work. The Middle School Framework is the result of reviewing research of best middle school level practices and reflects priorities of our community. The last issue of the Gazette included parent comments submitted during our last community circles in November. A forum of teachers, staff, and parents will review those comments and respond in a manner that maximizes student academic achievement and values the strengths and needs of our community.

Lincoln School Middle

As the principal of **Lincoln Middle School**, allow me to welcome you to our website. Lincoln is an exciting and energetic learning environment for both students and staff. We currently serve 1,280 students in grades sixth through eighth with three administrators, sixty-three certificated teachers, and twenty-five classified staff members.

Our school is organized into three interdisciplinary teams per grade level that work together to promote the intellectual, social, and emotional development of our students. In addition to the support of their team of teachers, students are assigned one counselor who works with them throughout their three developmental years at Lincoln. The goal is to provide academic rigor with a caring and supportive learning environment. Our teachers exemplify true professional learners by meeting weekly with their colleagues for continuous professional development and collaborative planning.

We remain committed to uphold the high standards that earned Lincoln Middle School exemplary recognition as a State Distinguished School, a National Blue Ribbon School of Excellence, and the Disney Spotlight School of the Year.

Please feel free to explore our website for further information about Lincoln Middle School.

Kathy Scott Principal

Santa Monica Alternative School House (SMASH) Alternative School

What Does it Mean to be Alternative?

Being an alternative school in the year 2000 means much of what it did in 1973 when SMASH what first founded. It means striving to create a learning environment where all children learn, develop, and create. Most importantly, we are striving to help children become active citizens in a democracy that is still being shaped. We want them to be a part of that shaping in ethical, moral, creative, and thoughtful ways.

In the most literal sense, alternative means other than the norm. However, we prefer to think of it as beyond the norm—to move ahead and lead in the areas of innovation and educational practices. As an alternative school everything—curriculum, practices, structures, and policies—are to be in constant review and development. The only constant is change itself. However, this change is not change for change's sake—but change that is deemed necessary after review and analysis. It will be change that will continue to promote children's development in the ways cited above.

Several ideas about learning and relationships serve as guides in the development of the SMASH alternative program. These guides are:

--A **curriculum** *that builds upon and grows from student interest and real life issues and problems. A curriculum that grows from children and teachers alike.*

--A **structure** *that offers flexibility and heterogeneous grouping arrangements for children, including cross-core opportunities for learning.*

--An **environment** *that embraces freedom with responsibility and deals with the tension and balance between the needs of the individual and the needs of the community.*

The instructional staff is focusing on the various areas of the curriculum in order to establish what important features of each discipline to include in our program. This clarity will serve as a foundation from which to build a solid, yet ever-changing, innovative program. We hope you will join us in our journey.

Malibu High School

Principal's Welcome

Thank you for visiting **Malibu High School**. Originally started as a middle school in 1963, Malibu began adding high school classes in 1992, graduating our first group of seniors in 1996. We are now proud of both of middle school and our high school. I am the principal of the entire school, with an assistant principal and a counselor who focus on middle school students, and an assistant principal and two counselors who focus on high school students. We have made great strides in making Malibu High School a wonderful and positive place for all of our students, and we have plans for continued growth.

Malibu High School is a different kind of public school. First of all, we are small. With approximately 180 per grade (approximately 1250 students total), we focus on knowing each student well. Having students from grade six all the way to grade twelve, we have the time to learn a great deal about each student. We have a counseling program, a mentoring program, a homeroom program and other ways of making sure that, we know each student. We have the new Malibu Boys and Girls Club right on our campus, yet another way for us to know all of our students. Our goal is that no students fall through the cracks, and that all students feel cared for in the school setting.

In terms of curriculum, we offer a fairly traditional college preparatory curriculum. The only "remedial" classes we offer are for students who need special services through Special Education or ESL. Middle school classes are heterogeneous. Honors classes are offered in high school, with Advanced Placement classes being offered in US History, US Government, English Language, English Literature, Spanish, Calculus (AB and BC), Studio Art, Art History, and Chemistry. Seniors have the opportunity to take courses at nearby Pepperdine University for a drastically reduced fee. In spite of being a small school, we offer many electives, including electives in Photography, Drama, Art, Choir, Instrumental Music, Yearbook, Journalism, Spanish, French, Astronomy, Geology, and Speech. Students are expected to contribute to demonstrate concern for their community through community service (10 hours a year for middle school; 20 for high school). Our average class size is 30 students. Our student population has grown so much that we are all anxious for the completion of our new 12-classroom building that we hope is ready for the 2002-03 school year.

We have had wonderful success in placing our students in the college of their choice. With a full-time college and career advisor, we help 65% of our seniors to enroll in a 4-year university and 30% to enroll in a two-year college. Every year we have students accepted to all of the UC schools and schools around the nation. There are currently seven former Malibu High School students attending Stanford University, as well as many other prestigious universities around the nation. I believe that we are as good or better than every high school in the nation in terms of preparing our students for four-year College.

I am proud of our success in the visual and performing arts. With outstanding facilities for our art and photography studios, our students do amazing work that is regularly seen in the community. Our music programs feature an outstanding jazz band, as well as a well-rounded program in instrumental and choral music. We have received high acclaim for both our middle school and high school drama productions. Our remodeled auditorium will be open in Fall, 2002 and will be an incredible venue for our performing arts programs.

In just a few years, we have developed an athletic program that has many championships to its name. Approximately 60% of our high school students participate in at least one athletic team. The Malibu Sharks water polo team is an eight-time league champion (they have not lost a league game in 8 seasons). We also have league championship banners in girl’s volleyball, girls track, boy’s volleyball, boy’s tennis, swimming, and boy’s soccer. Last year, our boy’s soccer team won the southern California CIF championship, a first for our school. We have just completed a new track and field facility with a beautiful all-weather track, and our new gymnasium will be completed when school begins in the fall of 2002.

Our school history can be summarized by our continuing concern for helping all students to succeed. Our growth in student numbers, our continued improvement in our program and our facilities, and our outstanding reputation in the community are a testament to our success.

Thank you for your interest in Malibu High School.

Michael D. Matthews Principal

Santa Monica High School

At Santa Monica High School, we are proud of our academic and career programs. We provide a wide variety of interesting and challenging opportunities for a student body with diverse backgrounds, abilities, and interests. Our outstanding faculty works with our students in the pursuit of their goals.

Academic Honesty Policy

Samohi believes that personal integrity is basic to all solid achievement and that students will reach their full potential only be being honest with themselves and others. Samohi also believes that academic integrity is basic to the progress of the school community toward rich learning and the respect of outside communities. Samohi expects all students to respect the educational purposes underlying all school activities and also expects administration, faculty, and staff to provide an environment that encourages honesty. Students caught cheating will receive a zero on the assignment.

Santa Monica Adult Education Center.....

2510 Lincoln Boulevard..... Santa Monica, California 90405.....Phone: 310.664.6222

Mission Statement

Provide our diverse student population with the necessary skills to become productive members of the workforce, participating community members, effective and caring family members, wise consumers, and confident lifelong learners.

We offer both preschool programs and school-age childcare programs throughout Santa Monica. We welcome the opportunity to work with children who have special needs and their parents to determine how we can support every child's successful participation in our programs.

Olympic High School

Principal's Message

Olympic High School students reflect a richly diverse population visibly engaged in a personalized academic environment supported by a devoted staff of instructors, counselors, and support personnel.

Olympic builds on student strengths as we assist each student in achieving academic success through a respectful and supportive process. Students participate in a wide variety of elective programs while moving toward the completion of their high school diploma. Olympic is fortunate to have courses provided through grants, and through partnerships with the City of Santa Monica, the Santa Monica Police Department, neighborhood volunteers, and local health care providers. These courses include classes in guitar and acting instruction, video production, criminal justice, 20th Century History, sober living, chess, Sound Art (digital music composition and recording), and a variety of on-going counseling services.

In June 2004 forty-nine students, more than one-third of the overall student population, received an Olympic High School diploma. Additional students have regained credits at Olympic High and returned to their home school to complete the last semester of their senior year. The Olympic High Advisory Board has just formed consisting of former Olympic students who have gone on to earn advanced degrees and build successful and productive careers. They will advise and collaborate with staff and students in strategies to assist students in following a flourishing life path.

We are strongly committed to community involvement and community service, connecting students to the resources and opportunities within the surrounding area. Students are prepared to make a choice among a variety of options in post-secondary education and training programs to ensure productive and successful lives.

Janie Gates, Principal

School Description

Olympic High School is the only continuation school in the Santa Monica Malibu Unified School District (SMMUSD). Enrolled are 145 students who need a smaller environment and a diverse delivery of curriculum, programs, and counseling. Our high school diploma program is designed for students with specialized needs and is structured differently than the regular high schools. The primary focus is to provide individualized, educational programs with a strong emphasis on curriculum, intensive guidance, and counseling.

School Mission Statement Olympic High School delivers effective, alternative educational opportunities.

We facilitate student potential and diversity and teach the building blocks necessary for life-long learning and success.

Policies & Procedures

Philosophy, Goals, Objectives & Plans

Concepts and Roles

BP 0200 (a) [formerly 0210 Goals for the District 1994-1998]

A. QUALITY EDUCATION FOR ALL* At each school, strengthen, expand and ensure access to an appropriate, challenging and articulated, educational experience for every student in our richly diverse learning community.

* Students who have been in our elementary programs will be successful readers and writers by the time they enter middle school.

* Develop and implement plans to expand the skillful use and application of technology

* Develop and implement plans to strengthen the link between school, higher learning and the community and the world of work.

* Develop and implement a plan for the integration of the teaching of mathematics, science, and health.

* Develop and implement a plan to facilitate students' transitions.

* Develop and implement an ongoing plan for students, family, staff, and community to enhance intercultural understanding and to improve human relations.

* All schools will develop programs to improve the graduation rate.

* All schools will develop programs to promote students' attendance, active participation in their learning and sense of belonging.

* Develop and implement a district-comprehensive assessment program of student learning outcomes.

B. EFFECTIVE UTILIZATION OF HUMAN RESOURCES

* Actively recruit and select well-qualified applicants reflecting and respectful of the district's and communities cultural diversity.

* Implement programs to encourage and support new employees, insuring their success while also continuing ongoing professional development for existing staff.

* Continue to refine the comprehensive evaluation program that provides training and in-service opportunities for certificated and classified managers in the area of effective employee evaluation.

C. EFFECTIVE RESOURCE ALLOCATION

* Continue to develop and expand the District's computer-based financial and student systems to facilitate site-based management and more effective district-wide decision-making. Improve the District facilities management functions to the extent necessary allowing the instructional and non-instructional

programs to achieve their maximum potential and to avoid the deterioration of the facilities as experienced in the pre-ES Reconstruction period. BP 0200 (b) [formerly 0220 Outcome Statements for the District]

All Santa Monica-Malibu Unified School District students will graduate as:

1. VISIONARY, VERSATILE LEARNERS who recognize and solve complex problems through reflection, informed risk-taking, critical evaluation, and artistic exploration.

2. THINKERS with a working knowledge and appreciation of academics, aesthetics, personal wellness, and self as well as an understanding of the needs of others.

3. GLOBAL CITIZENS who value their richly varied world and act to sustain the natural environment by participating in democratic processes through ethical, informed decision-making.

4. LIFE-LONG LEARNERS who, individually and in collaboration with others, are intrinsically motivated to pursue their personal best and attain meaningful, productive lives.

5. EFFECTIVE, MULTILINGUAL COMMUNICATORS who use verbal, written, mathematical, artistic, and technological languages to give receive value and process information.

March 10, 1994 March 25, 2004

School Improvement Program

Comprehensive PlansDETAIL

The goal of school improvement programs at participating schools shall be to improve instruction, auxiliary services, school environment, and school organization so as to meet the needs of all the school's students.

The school site governance council shall develop a school improvement plan to guide the improvement activities.

Upon Board of Education approval of the plan, the site governance council shall assume responsibility for the ongoing review of its implementation and a periodic evaluation of the program's effectiveness. The site governance council shall annually review the plan, establish the plan budget, and update the plan to reflect changing improvement needs and priorities.

REFERENCE

EDUCATION CODE
2000-52049 Improvement of K-12 education
62000-62007 Evaluation and sunsetting of programs
CODE OF REGULATIONS, TITLE 5
4000-4091 School Improvement Programs

Management Resources

1115 **Community Relations Press, Radio, and Television Coverage**

Communication with the Public

The Board of Education urges that persons who prepare press releases or news stories work closely and cooperatively with the Superintendent of Schools, or designee, both in the preparation and release of such information.

The Board of Education urges, furthermore, that persons who respond to press inquiries or who consent to be interviewed by a member of the press, consult the Superintendent of Schools, or designee, so as to insure that all accurate and comprehensive data are released consistent with current Board of Education policy.

In circumstances under which the response to a question or a more detailed press interview would be likely to place the respondee in the position of interpreting District policy, the Board urges that the person or agency be referred to the Superintendent, or designee, for a reply or for an interview.

ADOPTED REVISED CSBA DATE July 11, 1989

CDE PROGRAM ADVISORIES
06271.09 School-Based Program Coordination Act
09211.09 Implementing Class Size Reduction Under the Morgan-Hart Class Size Reduction Act of 1989
0620.09 Use of Categorical Funds for Motivation Incentives
0430.09 Using School Improvement Program Resources and SB 1882 Funding to Promote School Change
1107.89 Implementation of new procedures for noncompliance

ADOPTED REVISED CSBA DATE

November 5, 1998 September, 1998

DISTRICT GOAL Quality Education for All Effective Communication

Community Relations - Community Residents

Participation by the Public

Members of the School District community are encouraged to take an active part in school affairs. Such persons shall be invited to provide advice individually and in groups as follows:

1. In clarifying the general ideas and attitudes held by our residents regarding schools.

2. In determining educational goals, the purposes of courses of study and special instructional programs and services to be provided for students.

3. In evaluating the extent to which these purposes are being achieved by present practices.

4. In giving active assistance to the certificated staff in the actual operation of classes and services where the staff deems such aid valuable.

5. In helping to solve a specific problem or set of closely related problems about which the Board must make a decision.

The District staff shall consider needs and recommendations of the community in making their recommendations to the Board of Education and the Board of Education shall take these recommendations into consideration while using its own best judgment in arriving at decisions.

ADOPTED REVISED CSBA DATE

January 4, 1989

Business and Operations Budget Development

1.1 The District's Budget Document is a controlled spending plan, which contains an estimate of future revenues, expenditures, fiscal conditions, and financial reports for past and present fiscal periods.

1.2 The Board of Education shall approve, control, and regulate the Budget Development Process, for the purpose of adopting a balance budget.

1.3 The Board of Education shall ensure the appropriate Budget Implementation Process in order to maintain financial solvency on behalf of the students and community of the Santa Monica-Malibu Unified School District.

1.4 Pursuant to the State of California Education Code the Superintendent of Schools is hereby authorized to make expenditures and commitments in accordance and in harmony with the specific regulations of the Board of Education and administrative plans approved by the Board. This also applies to expenditures provided for by special Board of Education action.

1.5 The Superintendent shall direct the development of the budget for presentation to the Board of Education.

1.6 The Superintendent shall appoint a Budget Planning Committee to assist in the development of the budget.

1.7 The Board of Education shall appoint a Budget Advisory Committee to monitor and review the budget. The Committee shall include ten community members, one employee representative from each recognized employee group, and one high school student. The Budget Advisory Committee is established for the following purposes:

a). To improve the quality, acceptance and understanding of the budget process and financial reporting.

b). To advise and explore ways of bringing revenue to the District.

c). To provide additional assurances concerning the credibility of financial information used by the Board of Education and the administration in making Budget decisions.

d). To provide more direct personal contact and communication between the Board, administration, and community members on the budget issues.

e). To make recommendation to the Board of Education regarding the budget.

f). To educate committee members in the difficult areas and intricacies of school finance.

1.8 In the preparation of the budget, the Budget Planning Committee shall confer with staff, employee representatives, advisory councils, the P.T.S.A., and other interested individuals and groups so as to make the budget as nearly as possible an expression of the interests of all concerned.

1.9 The budget shall reflect the true estimated revenues and expenditures for each account. Contingencies shall be provided for by the appropriation for contingencies rather than in individual budget accounts.

LEGAL REFERENCES: Education Code 42120 - 42128

ADOPTED REVISED CSBA DATE

November 9, 1987

Enrollment & Ethnicity

• School	Sch. Code	American Indian or Alaska Native	Asian	Pacific Islander	Filipino	Hispanic or Latino	African American	White (not Hispanic)	Multiple or No Response	Total Enroll.
Adams (John) Middle	6058531	3 (0.3%)	42 (3.6%)	0 (0.0 %)	5 (0.4%)	559 (48.5%)	116 (10.1%)	416 (36.1%)	12 (1.0%)	1,153
Cabrillo (Juan) Elementary	6022537	0 (0.0 %)	7 (2.1%)	0 (0.0 %)	3 (0.9%)	55 (16.2%)	7 (2.1%)	262 (77.3%)	5 (1.5%)	339
Edison Elementary	6022545	0 (0.0 %)	2 (0.5%)	0 (0.0 %)	0 (0.0 %)	292 (72.5%)	28 (6.9%)	81 (20.1%)	0 (0.0 %)	403
Franklin Elementary	6022552	0 (0.0 %)	89 (11.3%)	0 (0.0 %)	3 (0.4%)	59 (7.5%)	24 (3.1%)	609 (77.6%)	1 (0.1%)	785
Grant Elementary	6022560	2 (0.3%)	40 (6.0%)	0 (0.0 %)	4 (0.6%)	206 (31.1%)	45 (6.8%)	361 (54.5%)	4 (0.6%)	662
Lincoln Middle	6061659	1 (0.1%)	98 (7.6%)	3 (0.2%)	4 (0.3%)	234 (18.2%)	95 (7.4%)	839 (65.4%)	9 (0.7%)	1,283
Malibu High	1995737	6 (0.5%)	40 (3.0%)	5 (0.4%)	2 (0.2%)	131 (9.9%)	43 (3.3%)	1,095 (82.8%)	0 (0.0 %)	1,322
McKinley Elementary	6022594	0 (0.0 %)	36 (8.8%)	0 (0.0 %)	1 (0.2%)	151 (36.7%)	47 (11.4%)	170 (41.4%)	6 (1.5%)	411
Muir (John) Elementary	6022578	1 (0.3%)	9 (2.6%)	0 (0.0 %)	0 (0.0 %)	120 (34.3%)	52 (14.9%)	152 (43.4%)	16 (4.6%)	350
Olympic High (Continuation)	1933373	0 (0.0%)	1 (0.8%)	1 (0.8%)	0 (0.0 %)	38 (31.7%)	51 (42.5%)	16 (13.3%)	13 (10.8%)	120
Point Dume Elementary	6022602	2 (0.6%)	15 (4.8%)	5 (1.6%)	4 (1.3%)	8 (2.6%)	6 (1.9%)	272 (87.2%)	0 (0.0%)	312
Rogers (Will) Elementary	6022644	2 (0.3%)	11 (1.7%)	2 (0.3%)	1 (0.2%)	326 (51.3%)	80 (12.6%)	211 (33.2%)	3 (0.5%)	636
Roosevelt Elementary	6022610	0 (0.0 %)	76 (9.7%)	1 (0.1%)	7 (0.9%)	85 (10.8%)	55 (7.0%)	520 (66.3%)	40 (5.1%)	784
Santa Monica Alternative (K-8)	6093538	2 (1.0%)	12 (6.3%)	0 (0.0 %)	4 (2.1%)	36 (18.8%)	23 (12.0%)	111 (58.1%)	3 (1.6%)	191
Santa Monica High	1938000	6 (0.2%)	228 (6.8%)	7 (0.2%)	11 (0.3%)	1,039 (30.8%)	372 (11.0%)	1,698 (50.4%)	8 (0.2%)	3,369
Webster Elementary	6022636	4 (0.9%)	24 (5.6%)	0 (0.0 %)	0 (0.0 %)	20 (4.7%)	13 (3.1%)	363 (85.4%)	1 (0.2%)	425
SANTA MONICA-MALIBU UNIFIED	1964980	29 (0.2%)	730 (5.8%)	24 (0.2%)	49 (0.4%)	3,359 (26.8%)	1,057 (8.4%)	7,176 (57.2%)	121 (1.0%)	12,545
County Total:		4,934 (0.3%)	132,736 (7.7%)	7,863 (0.5%)	38,458 (2.2%)	1,069,735 (61.7%)	179,801 (10.4%)	285,358 (16.5%)	15,155 (0.9%)	1,734,040
State Total:		51,827 (0.8%)	510,450 (8.1%)	39,634 (0.6%)	163,156 (2.6%)	2,961,097 (46.8%)	505,319 (8.0%)	1,981,491 (31.3%)	109,214 (1.7%)	6,322,188

Governing Body

Board of Education

The Santa Monica-Malibu Unified School District Board of Education typically meets the 1st and 3rd Thursday of each month at 7:30 P.M., in the District Office at 1651 - Sixteenth Street, Santa Monica, California 90404
Emily Bloomfield President
Julia Brownley Vice President
Oscar de la Torre
Jose Escarce
Kathy Wisnicki
Maria Leon-Vazquez
Shane McLoud
Kitty Smith, Malibu High School
Naomi Vasquez, Santa Monica High School
Mari Sahba, Olympic High School

Administration

John Deasy, Superintendent of Schools, Secretary to the Board of Education
Santa Monica - Malibu Unified School District
1651-16th Street
Santa Monica, CA 90404
(310) 450-8338

Dr. Michael Matthews, Assistant Superintendent/Chief of Staff
Santa Monica - Malibu Unified School District
1651-16th Street
Santa Monica, CA 90404
(310) 450-8338

Winston Braham , Assistant Superintendent/CFO
Business and Fiscal Services
Santa Monica - Malibu Unified School District
1651-16th Street
Santa Monica, CA 90404
(310) 450-8338

Linda Kaminski, Assistant Superintendent, Chief Academic Officer
Santa Monica - Malibu Unified School District
1651-16th Street
Santa Monica, CA 90404
(310) 450-8338

Timothy Walker, Assistant Superintendent, Special Education
Santa Monica - Malibu Unified School District
1651-16th Street
Santa Monica, CA 90404
(310) 450-8338

Mitigation Responsibilities

SMMUSD's Business Services, Pupil Services, Maintenance & Operations, Risk Management, Food Services, and Administration contribute to mitigation in their immediate responsibilities for the school's safety.

Constraints

Many constraints face SMMUSD and SMC in direct mitigation for prevention or impact caused by disasters. They depend on fire protection from Los Angeles County Fire Department and the City of Santa Monica Fire Department. Los Angeles County Sheriff's Department and the City of Santa Monica Police Department are responsible for law enforcement response and protection. California Highway Patrol is responsible for traffic control and law enforcement on the major roadways. This impacts SMMUSD and SMC concerning evacuation routes and transportation loss/incidents.

In addition, private utility and telecommunication companies are outside the school districts control for electrical and data/telecommunication service. Water and wastewater companies operate independently from the school district and college.

Therefore, direct mitigation is beyond the school district and college's control. SMMUSD and SMC have developed mitigation strategies within their infrastructure for services provided by outside agencies.

Santa Monica-Malibu USD schools and facilities are located in the Cities of Santa Monica and Malibu. The Cities and Los Angeles County are responsible for law enforcement and fire protections. Santa Monica College is located in the City of Santa Monica with 6 off site repeater towers. SMMUSD and SMC are not directly in control of 1st Responder action or mitigation.

Transportation Loss greatly impacts both school districts. The ability for students to travel to and from school is important from both an evacuation and economic standpoint. The school districts are dependent on city, county, and state roadways, plus freeways to transport students to and from schools.

Aviation Disasters is a constant threat to all the facilities for SMMUSD and SMC. The below airports are located and operate near the school grounds. Their flight patterns are over the schools.

- Los Angeles Airport: LAX
- Van Nuys Airport
- Ontario Airport
- John Wayne Airport
- Hawthorne Airport
- Long Beach Airport
- Santa Monica Airport

The City of Santa Monica Hazard Mitigation Plan identifies state regional, state, and federal resources that have a role in natural hazards and natural hazard mitigation.

Key Agencies:

- The Governor's Office of Emergency Services (OES) is responsible for disaster mitigation, preparedness, response, recovery, and the administration of federal funds after a major disaster declaration;

- The Southern California Earthquake Center (SCEC) gathers information about earthquakes, integrates this information on earthquake phenomena, and communicates this to end-users and the general public to increase earthquake awareness, reduce economic losses, and save lives.

- The California Division of Forestry (CDF) is responsible for all aspects of wildland fire protection on private, state, and administers forest practices regulations, including landslide mitigation, on non-federal lands.

- The California Division of Mines and Geology (DMG) is responsible for geologic hazard characterization, public education, the development of partnerships aimed at reducing risk, and exceptions (based on science-based refinement of tsunami inundation zone delineation) to state mandated tsunami zone restrictions; and

- The California Division of Water Resources (DWR) plans, designs, constructs, operates, and maintains the State Water Project; regulates dams, provides flood protection and assists in emergency management. It also educates the public, serves local water needs by providing technical assistance (HMP City of Santa Monica, CA 9/21/2004)

Historical Disaster Costs/FEMA

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DISAST NUMBER	3._P.A._I	2._Dsr	SUPP._	Su	Y2	9.	28._Amount_Elig	REVIEW DATE I	REVIEW DATE II	Date_PAPed	PHYSICAL DIMENSIONS OF................. DAMAGE TO FACILITY
1008	037-91174	00800		7	Y	E	$1,417.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG G, LIBRARY &
1008	037-91174	00801		7	Y	E	$1,621.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG H, CLASSROOM
1008	037-91174	00802		7	Y	E	$1,417.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG J, CLASSROOMS
1008	037-91174	00803		7	Y	E	$1,057.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG L, MUSIC
1008	037-91174	00804		8	Y	E	$2,575.00	03/21/95	06/20/95	06/22/95	WILL REOGERS ELEM SCH, BLDG M, CLASSROOM
1008	037-91174	00805		7	Y	E	$1,133.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG N, CLASSROOM
1008	037-91174	00806		8	Y	E	$1,133.00	03/21/95	06/20/95	06/22/95	WILL ROGERS ELEM SCH, BLDG P, CLASSROOM
1008	037-91174	00807		7	Y	E	$1,751.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG K, CHILD CARE
1008	037-91174	00808		6	Y	G	$13,599.00	03/21/95	05/05/95	06/07/95	WILL ROGERS ELEM SCH, ASPHALT PAVING BET
1008	037-91174	09576		10	Y	E	$7,840.00	03/21/95	09/08/95	09/11/95	WILL ROGERS ELEM SCH, BLDG A
1008	037-91174	09577		7	Y	E	$3,458.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG E, CLASSROOMS
1008	037-91174	09578		7	Y	E	$4,107.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG F, CLASSROOMS
1008	037-91174	09579		7	Y	E	$2,728.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG B, OFFICE; NU
1008	037-91174	09580		7	Y	E	$1,435.00	03/21/95	06/13/95	06/15/95	WILL ROGERS ELEM SCH, BLDG D, KINDERGART
1008	037-91174	09638	44946	19	Y	E	$19,664.00	11/09/94	03/11/96	03/18/96	MALIBU HIGH SCH, BLDG G
1008	037-91174	09717		5	Y	E	$14,546.00	01/10/95	02/27/95	03/15/95	GRANT ELEM SCH, BLDG C, RMS 141-142
1008	037-91174	09719	09719	5	Y	E	$9,635.00	01/10/95	02/27/95	03/15/95	MUIR ELEM SCH, LIBRARY
1008	037-91174	09725	09725	5	Y	E	$41,385.00	01/04/95	02/27/95	03/15/95	JOHN ADAMS MIDDLE SCH, BLDG B, CAFETERIA
1008	037-91174	09726		5	Y	E	$13,878.00	01/04/95	02/27/95	03/15/95	GRANT ELEM SCH, BUILDING F, (LIBRARY)
1008	037-91174	09727		10	Y	E	$10,376.00	12/17/94	09/08/95	09/11/95	GRANT ELEM SCH, BLDG E, AUDITORIUM
1008	037-91174	09729	09729	5	Y	E	$17,738.00	01/10/95	02/27/95	03/15/95	MUIR ELEM SCH, BLDG C, ROOMS 12-17
1008	037-91174	09733	09733	7	Y	E	$96,420.00	03/01/95	06/13/95	06/15/95	JOHN ADAMS MIDDLE SCH, BLDG "K", AUDITOR
1008	037-91174	16471	76023	49	Y	E	$-8,107.00	07/18/97	07/19/97	07/22/97	ROOSEVELT ELEM SCH, BLDG A
1008	037-91174	16472	99780	49	Y	E	$-52,545.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG F, LIBRARY
1008	037-91174	16473	22572	49	Y	E	$-7,445.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, TECHNOLOGY, BLDG
1008	037-91174	16474	22412	49	Y	E	$-47,985.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG N, POOL
1008	037-91174	16475	22416	49	Y	E	$-98,850.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG J, ADMIN
1008	037-91174	16476	22574	49	Y	E	$-36,582.00	07/18/97	07/19/97	07/22/97	DISTRICT OFFICE
1008	037-91174	16477	22575	49	Y	E	$-146,431.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG D, ENGLISH
1008	037-91174	16478	76019	49	Y	E	$-158,418.00	07/19/97	07/19/97	07/22/97	LINCOLN MIDDLE SCH, POOL BLDG J
1008	037-91174	16479	87516	49	Y	E	$-79,596.00	07/18/97	07/19/97	07/22/97	LINCOLN MIDDLE SCH, BLDG E
1008	037-91174	16480	45065	49	Y	E	$-4,686.00	07/18/97	07/19/97	07/22/97	LINCOLN MIDDLE SCH, BLDG A
1008	037-91174	16481	99785	49	Y	E	$-85,703.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG F, LANGUAGE
1008	037-91174	16483	99785	49	Y	E	$-72,200.00	07/18/97	07/19/97	07/22/97	ROOSEVELT ELEM SCH
1008	037-91174	16485	75651	49	Y	E	$-7,890.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG B
1008	037-91174	16486	75661	49	Y	E	$-19,060.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG C, BUSINESS
1008	037-91174	16487	76026	49	Y	E	$-12,466.00	07/18/97	07/19/97	07/22/97	ROOSEVELT ELEM SCH, BLDG D
1008	037-91174	16488	76029	49	Y	E	$-5,111.00	07/18/97	07/19/97	07/22/97	ROOSEVELT ELEM SCH, BLDG 4
1008	037-91174	16489	99786	49	Y	E	$-14,444.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG G, HISTORY
1008	037-91174	16490	99789	49	Y	E	$-159,271.00	07/18/97	07/19/97	07/22/97	SANTA MONICA HIGH SCH, BLDG H, BARNUM HA
1008	037-91174	18893	22410	29	Y	B	$128,580.00	09/18/96	10/15/96	10/16/96	LINCOLN MIDDLE SCH - ATHLETIC FIELD
1008	037-91174	22401	22572	4	N	E	$54,725.00	05/02/94	12/06/94	01/06/95	SANTA MONICA HIGH SCH, TECHNICAL BLDG
1008	037-91174	22402		3	Y	A	$5,320.00	06/08/94	10/11/94	10/28/94	SANTA MONICA HIGH SCH, CAMPUS WIDE
1008	037-91174	22403		7	Y	E	$3,438.00	02/06/95	06/13/95	06/15/95	MCKINLEY ELEM SCH, CLASSROOM BLDG B
1008	037-91174	22406	99780	18	Y	E	$151,156.00	11/19/94	03/04/96	03/08/96	SANTA MONICA HIGH SCH, BLDG F, LIBRARY
1008	037-91174	22407		3	Y	B	$3,684.00	08/04/94	10/11/94	10/28/94	LINCOLN MIDDLE SCH, J BLDG
1008	037-91174	22408		18	V	E	$112,361.00	08/16/94	03/04/96	03/08/96	SANTA MONICA HIGH SCH, BLDG P, AUXILIARY
1008	037-91174	22410	22410	5	Y	B	$412,764.00	07/09/94	02/27/95	03/15/95	LINCOLN MIDDLE SCH, TEMPORARY POWER
1008	037-91174	22412	22412	12	Y	E	$52,433.00	08/16/94	09/18/95	09/19/95	SANTA MONICA HIGH SCH, BLDG N, POOL
1008	037-91174	22413	75651	22	V	E	$108,532.00	03/21/95	04/26/96	04/29/96	SANTA MONICA HIGH SCH, SCIENCE BLDG B
1008	037-91174	22414		3	Y	A	$11,754.00	08/10/94	10/11/94	10/28/94	LINCOLN MIDDLE SCH, CAMPUS WIDE
1008	037-91174	22416	22416	11	Y	E	$139,850.00	08/16/94	09/12/95	09/13/95	SANTA MONICA HIGH SCH, BLDG J, ADMIN
1008	037-91174	22419		13	Y	A	$995.00	09/12/95	11/03/95	11/13/95	DISTRICT-WIDE
1008	037-91174	22420		4	Y	B	$1,134.00	11/08/94	01/05/95	01/06/95	DISTRICT WIDE

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DISAST NUMBER	3._P.A._I	2._Dsr	SUPP._	Su	Y2	9.	28._Amount_Elig	REVIEW DATE I	REVIEW DATE II	Date_PAPed	PHYSICAL DIMENSIONS OF................. DAMAGE TO FACILITY
1008	037-91174	22421	22421	5	Y	E	$23,468.00	01/18/95	02/27/95	03/15/95	MUIR ELEM SCH, BLDG A
1008	037-91174	22422	22422	7	Y	E	$32,514.00	02/21/95	06/13/95	06/15/95	JOHN ADAMS MIDDLE SCH, GYMNASIUM BLDG C
1008	037-91174	22426		11	Y	E	$8,326.00	08/16/94	09/12/95	09/13/95	SANTA MONICA HIGH SCH, MUSIC BLDG L.
1008	037-91174	22445	22572	1	Y	E	$26,268.00	05/23/94	07/12/94	07/21/94	SANTA MONICA HIGH SCH, BLDG A, TECHNOLOG
1008	037-91174	22446	22446	3	Y	E	$31,000.00	05/31/94	10/11/94	10/28/94	SANTA MONICA HIGH SCH, AUXILARY GYM
1008	037-91174	22447		2	Y	B	$3,000.00	05/27/94	08/05/94	08/08/94	SANTA MONICA HIGH SCH, BARNUM HALL, BLDG
1008	037-91174	22480		5	Y	E	$1,154.00	11/28/94	02/27/95	03/15/95	EDISON ELEM. SCHOOL/LIBRARY ENTRY WAY
1008	037-91174	22524		7	Y	E	$3,064.00	11/09/94	06/13/95	06/15/95	FRANKLIN ELEM SCH, BLDG C, LIBRARY
1008	037-91174	22525		4	Y	E	$6,946.00	11/09/94	01/05/95	01/06/95	FRANKLIN ELEM SCH, BLDG D, CLASSROOMS
1008	037-91174	22570		13	Y	B	$330.00	09/12/95	11/03/95	11/13/95	LINCOLN MIDDLE SCHOOL
1008	037-91174	22571	22575	4	Y	E	$14,804.00	11/21/94	01/05/95	01/06/95	SANTA MONICA HIGH SCH, BLDG D, LITTLE TH
1008	037-91174	22572	22572	4	Y	E	$83,623.00	07/09/94	01/05/95	01/06/95	SANTA MONICA HIGH SCH, TECHNOLOGY BLDG A
1008	037-91174	22574	22574	10	Y	E	$44,637.00	10/29/94	09/08/95	09/11/95	DISTRICT OFFICE
1008	037-91174	22575	22575	11	Y	E	$205,100.00	08/16/94	09/12/95	09/13/95	SANTA MONICA HIGH SCH, BLDG D, ENGLISH
1008	037-91174	22577		1	Y	B	$2,500.00	05/27/94	07/12/94	07/21/94	SANTA MONICA HIGH SCH, POOL BLDG
1008	037-91174	44839	44839	5	Y	E	$17,429.00	01/04/95	02/27/95	03/15/95	SANTA MONICA ALTERNATIVE SCH, GRADES K-4
1008	037-91174	44840	44840	6	Y	E	$23,836.00	12/19/94	05/05/95	06/07/95	SANTA MONICA ALTERNATIVE SCH (GRADES 5-8
1008	037-91174	44881		4	Y	E	$1,777.00	11/28/94	01/05/95	01/06/95	MCKINLEY ELEM SCH, CHILDREN'S CENTER - H
1008	037-91174	44883		4	Y	E	$1,035.00	11/28/94	01/05/95	01/06/95	MCKINLEY ELEM SCH, CAFETERIA BLDG
1008	037-91174	44895		4	Y	G	$4,394.00	11/02/94	01/05/95	01/06/95	MALIBU HIGH SCH, CAMPUS SITE
1008	037-91174	44898		4	Y	E	$8,091.00	11/08/94	01/05/95	01/06/95	FRANKLIN ELEM SCH
1008	037-91174	44900		4	Y	G	$7,923.00	11/30/94	01/05/95	01/06/95	SANTA MONICA HIGH SCH
1008	037-91174	44914	44914	7	Y	E	$7,855.00	02/13/95	06/09/95	06/15/95	MCKINLEY ELEM SCH, BLDG C, MAIN CLASSROO
1008	037-91174	44946	44946	9	Y	E	$6,305.00	11/02/94	07/29/95	08/01/95	MALIBU HIGH SCH, BLDG G
1008	037-91174	44948	44948	4	Y	E	$26,308.00	11/08/94	01/05/95	01/06/95	FRANKLIN ELEM SCH
1008	037-91174	44949		6	Y	G	$5,893.00	11/09/94	05/05/95	06/07/95	FRANKLIN ELEM SCH, RECREATION PLAYGROUND
1008	037-91174	45063	45063	10	N	E	$.00	08/04/95	09/08/95	09/11/95	LINCOLN MIDDLE SCH
1008	037-91174	45065	45065	22	N	E	$.00	04/04/96	04/26/96	04/29/96	LINCOLN MIDDLE SCHOOL - BUILDING A
1008	037-91174	45066	87516	18	Y	E	$27,100.00	08/08/95	03/05/96	03/08/96	LINCOLN MIDDLE SCH, BLDG E
1008	037-91174	45489	44948	41	Y	E	$14,343.00	02/11/97	04/28/97	04/30/97	FRANKLIN ELEM SCH, BLDG F
1008	037-91174	45752	76019	48	Y	E	$55,870.00	04/18/97	06/13/97	06/16/97	LINCOLN MIDDLE SCH, BLDG J, POOL
1008	037-91174	45799	47698	40	N	E	$.00	02/21/97	03/25/97	04/28/97	LINCOLN MID SCH - BLVD B, AUDITORIUM
1008	037-91174	46633	44914		N	E	$14,688.00	05/02/97			MCKINLEY ELEM SCH, BLDG C
~~1008~~	~~037-91174~~	~~47407~~		~~35~~	~~N~~	~~E~~	~~$.00~~	~~05/30/96~~	~~06/13/96~~	~~06/18/96~~	~~MOUNT VERNON MIDDLE SCH, RELOCATABLE BLD~~
~~1008~~	~~037-91174~~	~~47682~~	~~22446~~	~~28~~	~~Y~~	~~E~~	~~$68,924.00~~	~~07/26/96~~	~~09/16/96~~	~~09/24/96~~	~~SANTA MONICA HIGH SCH, BUILDING P~~
1008	037-91174	47683	69159	31	Y	G	$240,008.00	09/18/96	10/29/96	10/31/96	LINCOLN MIDDLE SCH - CAMPUS
1008	037-91174	47698	47698	23	Y	E	$4,365.00	05/07/96	05/09/96	05/23/96	LINCOLN MIDDLE SCH, BLDG B
1008	037-91174	47935	22572	15	Y	E	$5,277.00	11/25/95	12/11/95	01/04/96	SANTA MONICA HIGH SCH, TECH A
1008	037-91174	47938	44946	20	Y	E	$189.00	03/13/96	03/13/96	03/26/96	MALIBU HIGH SCHOOL, BLDG G.
1008	037-91174	47941		24	Y	E	$2,382.00	04/19/96	05/24/96	05/28/96	JOHN ADAMS MIDDLE SCHOOL, BLDG G
1008	037-91174	47942	45063	27	Y	E	$13,629.00	05/14/96	07/10/96	07/10/96	LINCOLN MIDDLE SCHOOL
1008	037-91174	60841	22572	45	Y	E	$1,678.00	03/17/97	05/22/97	05/23/97	SANTA MONICA HIGH SCH, BLDG A TECHNOLOGY
1008	037-91174	60843	75651	49	Y	E	$8,216.00	03/17/97	06/17/97	07/22/97	SANTA MONICA HIGH SCH, BLDG B, SCIENCE
1008	037-91174	60844	60844	45	Y	G	$341,362.00	03/13/97	05/23/97	05/23/97	ALL CAMPUSES EXCEPT LINCOLN MIDDLE SCH
1008	037-91174	60856	22410	39	Y	B	$59,834.00	02/03/97	03/05/97	03/25/97	LINCOLN MIDDLE SCH - ATHLETIC FIELD
1008	037-91174	60860	22572	38	Y	E	$13,793.00	01/28/97	02/28/97	02/28/97	SANTA MONICA HIGH SCH, TECHNOLOGY - BLDG
1008	037-91174	60865	88184	45	Y	E	$36,610.00	03/14/97	05/23/97	05/23/97	CONTINUATION HIGH SCH, HUMANITIES BLDG
1008	037-91174	60869	87516	41	Y	E	$-89,386.00	02/21/97	04/28/97	04/30/97	LINCOLN MIDDLE SCH, BLDG E
1008	037-91174	60870	85150	38	Y	E	$15,159.00	02/03/97	02/28/97	02/28/97	LINCOLN MIDDLE SCH, BLDG H
1008	037-91174	60872	87518	37	Y	E	$1,790.00	02/03/97	02/20/97	02/28/97	LINCOLN MIDDLE SCH, BLDG D
1008	037-91174	60978	45066	32	Y	E	$15,102.00	10/30/96	12/09/96	12/10/96	LINCOLN MIDDLE SCH, LIBRARY
1008	037-91174	67022	60844	51	Y	G	$85,400.00	06/28/97	08/06/97	08/08/97	ALL CAMPUSES EXCEPT LINCOLN MIDDLE SCH
1008	037-91174	68436	99780	32	Y	E	$16,120.00	10/30/96	12/09/96	12/10/96	SANTA MONICA HIGH SCH, LIBRARY
1008	037-91174	69159	69159	10	Y	G	$10,376.00	06/21/95	09/08/95	09/11/95	LINCOLN MIDDLE SCHOOL

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DISAST NUMBER	3._P.A._I	2._Dsr	SUPP._	Su	Y2	9.	28._Amount_Elig	REVIEW DATE I	REVIEW DATE II	Date_PAPed	PHYSICAL DIMENSIONS OF................. DAMAGE TO FACILITY
1008	037-91174	69185	76019	26	Y	E	$170,718.00	05/21/96	06/18/96	06/27/96	LINCOLN MIDDLE SCHOOL, BLDG J, POOL
1008	037-91174	69199	76030	43	Y	E	$15,337.00	03/25/97	05/06/97	05/08/97	ROOSEVELT ELEM SCH, BLDG J
1008	037-91174	72983	72983	0	Y	E	$788,475.00	02/03/94	02/03/94	02/05/94	ADVANCE FUNDING
1008	037-91174	75646	22572	22	V	E	$158,558.00	03/21/95	04/26/96	04/29/96	SANTA MONICA HIGH SCH, TECHNOLOGY BLDG A
1008	037-91174	75647		6	Y	E	$2,552.00	11/21/94	05/05/95	06/07/95	CABRILLO ELEM SCH, BLDG B
1008	037-91174	75650		2	Y	B	$375.00	06/08/94	08/05/94	08/08/94	SANTA MONICA HIGH SCH, SCHOOL WIDE
1008	037-91174	75651	75651	2	Y	E	$55,500.00	05/23/94	08/05/94	08/08/94	SANTA MONICA HIGH SCH, BLDG B
1008	037-91174	75653	22572	22	Y	E	$403,400.00	05/19/94	04/03/96	04/29/96	SANTA MONICA HIGH SCH, BLDG A, TECHNOLOG
1008	037-91174	75658		2	Y	A	$4,565.00	06/24/94	08/05/94	08/08/94	LINCOLN MIDDLE SCHOOL
1008	037-91174	75659	76981	22	V	E	$92,393.00	08/16/94	04/26/96	04/29/96	SANTA MONICA HIGH SCH, BLDG M, MAIN GYM
1008	037-91174	75660		23	V	E	$5,660.00	04/14/95	05/21/96	05/23/96	LINCOLN MIDDLE SCH, BLDG B, AUDITORIUM
1008	037-91174	75661	75661	11	Y	E	$49,060.00	08/16/94	09/12/95	09/13/95	SANTA MONICA HIGH SCH, BLDG C, BUSINESS
1008	037-91174	76017		13	Y	B	$12,751.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL
1008	037-91174	76019	76019	10	Y	E	$6,930.00	03/22/95	09/08/95	09/11/95	LINCOLN MIDDLE SCH, BLDG J, POOL (A&E)
1008	037-91174	76023	76023	13	Y	E	$95,773.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID A)
1008	037-91174	76024	76024	13	Y	E	$22,291.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID B)
1008	037-91174	76025	76025	13	Y	E	$26,940.00	06/01/95	11/07/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID C)
1008	037-91174	76026	76026	13	Y	E	$59,760.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID D)
1008	037-91174	76027	76027	13	Y	E	$31,762.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID E)
1008	037-91174	76028		13	Y	E	$3,110.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BLDG G)
1008	037-91174	76029	76029	13	Y	E	$74,823.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID H)
1008	037-91174	76030	76030	13	Y	E	$16,692.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID J)
1008	037-91174	76031		13	Y	E	$33,600.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL (BID K)
1008	037-91174	76063		13	Y	G	$98,763.00	06/01/95	11/03/95	11/13/95	ROOSEVELT ELEMENTARY SCHOOL-SITEWORK
1008	037-91174	76150		2	Y	B	$2,500.00	05/27/94	08/05/94	08/08/94	SANTA MONICA HIGH SCH, BLDG D
1008	037-91174	76151		22	V	A	$1,934.00	04/11/96	04/25/96	04/29/96	LINCOLN MIDDLE SCH, CAMPUS
1008	037-91174	76243		6	Y	E	$12,473.00	12/17/94	05/05/95	06/07/95	GRANT ELEM, BLDG H
1008	037-91174	76826	76826	30	Y	G	$137,839.00	08/26/96	10/17/96	10/17/96	LINCOLN MIDDLE SCH, CAMPUS-WIDE
1008	037-91174	76948		1	Y	B	$1,706.00	05/19/94	07/12/94	07/21/94	LINCOLN MIDDLE SCH, CAMPUS WIDE
1008	037-91174	76949		1	Y	B	$2,000.00	05/27/94	07/12/94	07/21/94	SANTA MONICA HIGH SCH, BLDG P
1008	037-91174	76976		4	Y	E	$13,209.00	06/18/94	12/06/94	01/06/95	SANTA MONICA HIGH SCH, CAMPUS WIDE
1008	037-91174	76979	99789	1	Y	E	$22,475.00	05/23/94	07/12/94	07/21/94	SANTA MONICA HIGH SCH, BLDG H, BARNUM HA
1008	037-91174	76980		3	Y	E	$31,442.00	06/24/94	10/11/94	10/28/94	LINCOLN MIDDLE SCHOOL, BLDG A-K
1008	037-91174	76981	76981	1	Y	E	$1,200.00	05/27/94	07/12/94	07/21/94	SANTA MONICA HIGH SCH, MAIN GYM
1008	037-91174	78550	09719	41	Y	E	$2,308.00	03/04/97	04/28/97	04/30/97	MUIR ELEM SCH, BUILDING B, LIBRARY
1008	037-91174	78551	09729	41	Y	E	$9,815.00	03/04/97	04/28/97	04/30/97	MUIR ELEM SCH, BUIDING C
1008	037-91174	78552	22421	48	Y	E	$4,352.00	05/02/97	06/13/97	06/16/97	JOHN MUIR ELEM SCH, BLDG A
1008	037-91174	78553	44839	41	Y	E	$21,568.00	02/21/97	04/28/97	04/30/97	SANTA MONICA ALTERNATIVE SCH, BLDG A
1008	037-91174	78554	44840	41	Y	E	$36,896.00	02/21/97	04/28/97	04/30/97	SANTA MONICA ALTERNATIVE SCH, BLDG B
1008	037-91174	78662	76024	45	Y	E	$9,031.00	03/25/97	05/12/97	05/23/97	ROOSEVELT ELEM SCH, BUILDING B
1008	037-91174	78663	76025	46	Y	E	$18,060.00	03/25/97	05/27/97	05/30/97	ROOSEVELT ELEM SCH, BLDG C
1008	037-91174	78664	76027	42	Y	E	$7,698.00	03/26/97	05/05/97	05/06/97	ROOSEVELT ELEM SCH, BLDG E
1008	037-91174	78665	09725	44	Y	E	$15,232.00	03/25/97	05/08/97	05/12/97	JOHN ADAMS MIDDLE SCH, BLDG B
1008	037-91174	78666	22422	50	Y	E	$43,964.00	03/25/97	07/22/97	07/23/97	JOHN ADAMS MIDDLE SCH, BLDG C, GYMNASIUM
1008	037-91174	78667	09733	47	Y	E	$-7,862.00	03/26/97	05/31/97	06/13/97	JOHN ADAMS MIDDLE SCH, BLDG K
1008	037-91174	81288	72983	16	Y	E	$-788,475.00	01/22/96	01/27/96	01/27/96	BUILDING AND STRUCTURES
1008	037-91174	83661	47698	36	Y	E	$23,044.00	12/11/96	01/24/97	01/30/97	LINCOLN MIDDLE SCH, BUILDING B, AUDITORI
1008	037-91174	85146	88199	18	Y	E	$28,274.00	01/31/96	03/04/96	03/08/96	LINCOLN MIDDLE SCHOOL, BLDG F
1008	037-91174	85147		18	Y	E	$69,348.00	01/31/96	03/04/96	03/08/96	LINCOLN MIDDLE SCH, BLDG K
1008	037-91174	85148	45065	22	Y	E	$130,228.00	02/29/96	04/26/96	04/29/96	LINCOLN MIDDLE SCHOOL, BUILDING A
1008	037-91174	85149		22	Y	E	$160,780.00	03/11/96	04/26/96	04/29/96	LINCOLN MIDDLE SCHOOL, BUILDING C
1008	037-91174	85150	85150	22	Y	E	$236,165.00	04/03/96	04/26/96	04/29/96	LINCOLN MIDDLE SCHOOL - BUILDING H
1008	037-91174	85151	87518	24	Y	E	$442,773.00	04/13/96	05/24/96	05/28/96	LINCOLN MIDDLE SCH, BLDG D
1008	037-91174	85152	87516	22	Y	E	$2,043,975.00	04/03/96	04/26/96	04/29/96	LINCOLN MIDDLE SCH, BUILDING E

Assets

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SiteName	BldgName	AddressName	CityName	Zip	YearBuilt	ConstClassDesc	WallType	Story	SqFt	BldgCRN	ContentCRN
CABRILLO ELEMENTARY SCHOOL	ADMINISTRATION	30237 MORNINGVIEW DRIVE	MALIBU	90265	1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2518	354636	65002
	MULTI-PURPOSE				1987	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4500	695168	157410
	CLASSROOMS 1- 5				1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5666	747430	148259
	CLASSROOMS 6-11				1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4820	618056	119285
	CLASSROOMS 12-15				1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4820	617933	119285
	CLASSROOMS 16-23				1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	7740	990826	199810
	LIBRARY				1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2696	380800	402401
	PORTABLE A				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE B				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 24				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 25				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1965	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	8675	0
EDISON ELEMENTARY SCHOOL	ADMINISTRATION	2425 KANSAS AVENUE	SANTA MONICA	90404	1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3552	461538	139200
	MULTI-PURPOSE				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	7276	945792	270882
	CLASSROOM 3				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	RESTROOM BUILDING 1				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	124309	20470
	COMPUTER LAB				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	124410
	CLASSROOM 5				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	LIBRARY				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2688	357654	401206
	CLASSROOM 6				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	CLASSROOMS 7-11				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4224	559565	109044
	CLASSROOM 12				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	CLASSROOM 13				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	CLASSROOM 14				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	RESTROOM BUILDING 2				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	124309	20470
	CLASSROOM 15				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	126638	24783
	PORTABLE CLASSROOM 16				1983	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 17				1983	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 18				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 19				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 20				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 21				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 22				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 23				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 24				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 25				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1440	79200	30974

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	PORTABLE CLASSROOM 26				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1440	79200	30974
	PORTABLE CLASSROOM 27				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1440	79200	30974
	PORTABLE CLASSROOM 28				1990	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1440	79200	30974
	PORTABLE CLASSROOM 29				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	101424	0
FRANKLIN ELEMENTARY SCHOOL	ADMINISTRATION/CLASSROOMS	2400 MONTANA AVENUE	SANTA MONICA	90403	1937	REINFORCED CONCRETE FRAME	CONCRETE, FORMED	2	23418	3276048	604540
	MULTI-PURPOSE				1937	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5280	797635	195684
	KINDERGARTEN				1937	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3376	456130	87152
	CLASSROOMS 8-14				1937	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	7750	1030594	200068
	CLASSROOMS 15-17				1937	MASONRY BEARING WALLS	CONCRETE, FORMED	1	3360	453515	86740
	CLASSROOMS 18-20				1937	MASONRY BEARING WALLS	CONCRETE, FORMED	1	2880	386368	74348
	LIBRARY				1960	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2800	403902	417923
	PORTABLE CLASSROOM 28				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 27				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 26				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 25				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 23				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 24				1970	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1280	70400	27533
	PORTABLE CLASSROOM 39				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 40				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1943	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	53247	0
GRANT ELEMENTARY SCHOOL	CLASSROOMS 2- 5	2368 PEARL STREET	SANTA MONICA	90405	1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4350	567930	112298
	CLASSROOMS 10-13				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3550	470548	91644
	ADMINISTRATION/CLASSROOMS				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5750	734527	148438
	CLASSROOMS 26-29				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5150	663694	132949
	CLASSROOMS 30-31				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	10000	1305203	258151
	RESTROOM BUILDING 1				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	800	123778	17058
	RESTROOM BUILDING 2				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1200	185090	25587
	CLASSROOMS 37-40				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5376	699633	138782
	CAFETERIA/CLASSROOMS				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	14117	2150928	364433
	LIBRARY/CLASSROOMS				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5780	788629	149212
	AUDITORIUM				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4080	677098	48292
	PORTABLE CLASSROOM 70				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 71				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 72				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 73				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 74				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650

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	PORTABLE CLASSROOM 75				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 80				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 81				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 82				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 83				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	24594	0
MCKINLEY ELEMENTARY SCHOOL	ADMINISTRATION/CLASSROOMS	2401 SANTA MONICA BOULEVARD	SANTA MONICA	90404	1925	MASONRY BEARING WALLS	CONCRETE, FORMED	2	25563	3583006	656914
	CLASSROOMS 107-110, 207-210				1925	MASONRY BEARING WALLS	CONCRETE, FORMED	2	13320	1838047	343858
	CAFETERIA				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4120	620741	153273
	KINDERGARTEN				1973	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3532	475416	91180
	PORTABLE CLASSROOM B1				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B2				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B3				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B4				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B5				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B6				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B7				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B8				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B9				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	20285	0
OLYMPIC HIGH SCHOOL	ADMINISTRATION/CLASSROOMS	721 OCEAN PARK BOULEVARD	SANTA MONICA	90404	1930	MASONRY BEARING WALLS	CONCRETE, FORMED	1	27332	3918512	705581
	CLASSROOMS 12-17				1937	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	6450	878492	166509
	CLASSROOMS 9-10				1937	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2375	326337	61312
	CLASSROOMS 18-19				1978	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	METAL SIDING	1	960	38946	26695
	CLASSROOM 20				1978	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	METAL SIDING	1	960	38946	26695
	CLASSROOM 21				1978	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	METAL SIDING	1	960	38946	26695
	CLASSROOM 22				1978	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	METAL SIDING	1	960	38946	26695
	CLASSROOM 23				1978	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	METAL SIDING	1	960	38946	26695
	PORTABLE OFFICE				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	21346
	PORTABLE CHILD CARE				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CHILD CARE				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE LOUNGE				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1930	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	22567	0
WILL ROGERS ELEMENTARY SCHOOL	ADMINISTRATION/CLASSROOMS	2401 FOURTEENTH STREET	SANTA MONICA	90405	1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME -COLD ST	1	3795	543099	97594
	MULTI-PURPOSE				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5759	902585	214248
	KINDERGARTEN				1946	MASONRY BEARING WALLS	CONCRETE, FORMED	1	1560	223110	40273
	CLASSROOM 500 WING				1946	MASONRY BEARING WALLS	CONCRETE, FORMED	1	5370	767348	138529

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	CLASSROOM 400 WING				1946	MASONRY BEARING WALLS	CONCRETE, FORMED	1	5370	767348	138629
	CLASSROOM 300 WING				1946	MASONRY BEARING WALLS	CONCRETE, FORMED	1	5370	767348	138629
	CLASSROOM 200 WING				1946	MASONRY BEARING WALLS	CONCRETE, FORMED	1	5370	767348	138629
	CLASSROOM 100 WING				1946	MASONRY BEARING WALLS	CONCRETE, FORMED	1	5370	767348	138629
	CLASSROOM 106				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	142057	24783
	CLASSROOM 206				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	142057	24783
	CLASSROOM 306				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	142057	24783
	CLASSROOM 406				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	142057	24783
	CLASSROOM 506				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1024	149642	26434
	PORTABLE CLASSROOM 3				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 4				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 5				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 408				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 407				1998	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 6				1998	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 507				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 508				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 509				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 510				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM RM. 511				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	66040	0
ROOSEVELT ELEMENTARY SCHOOL	ADMINISTRATION/CLASSROOMS	801 MONTANA AVENUE	SANTA MONICA	90405	1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4094	587258	105688
	AUDITORIUM				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4923	826047	183147
	CAFETERIA				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4901	796187	182327
	TEACHERS WORKROOM				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1110	151548	50069
	CLASSROOMS 6-9				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4872	638303	219860
	STORAGE ROOM				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	464	61651	20941
	GIRLS RESTROOM 1				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	464	72808	9894
	CLASSROOMS 10-13				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3888	539248	100369
	MEDIA CENTER/CLASSROOMS				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	2	7712	1067486	770257
	BOYS RESTROOM				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	464	72808	9894
	GIRLS RESTROOM 2				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	464	72808	9894
	CLASSROOMS 14-18				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5532	718391	142810
	PORTABLE CLASSROOMS B 5-B 6				1984	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1920	105600	41299
	CLASSROOM 5				1984	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	960	131775	24783
	PORTABLE CLASSROOM B 4				1983	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	24783
	GIRLS RESTROOM 3				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	305	47383	6503

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	KINDERGARTEN				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2424	337739	62577
	PORTABLE CLASSROOMS B 1				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOMS B 2-B 3				1983	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	1216	66880	26156
	PORTABLE CLASSROOMS B 7				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOMS B 8				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOMS B 9				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOMS B10				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOMS B11				1992	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B-12				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B-13				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1940	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	28907	0
WEBSTER ELEMENTARY SCHOOL	ADMINISTRATION	3602 WINTER CANYON	MALIBU	90265	1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1548	215960	60654
	MULTI-PURPOSE				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	6745	1106628	250929
	CLASSROOMS 1- 4				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3956	520803	102125
	CLASSROOMS 8-10				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3565	473668	92031
	CLASSROOMS 13-16				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4198	549627	108372
	CLASSROOMS 17-20				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3840	506894	99130
	KINDERGARTEN				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2244	317552	57930
	LIBRARY/CLASSROOMS				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3950	546505	84765
	PORTABLE CLASSROOM 21				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 22				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 23				1999	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1947	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	35499	0
JOHN ADAMS MIDDLE SCHOOL	ADMINISTRATION/CLASSROOMS	2425 SIXTEENTH STREET	SANTA MONICA	90405	1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	8149	1110307	242191
	CLASSROOMS 16-18				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2880	394738	85594
	CLASSROOMS 10-13				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3542	476673	105270
	CLASSROOMS 22, 24				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2300	322038	68356
	ATTENDANCE/CLASSROOMS				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	7825	992455	232562
	CLASSROOMS 50-53				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4782	627300	142123
	CLASSROOMS 54-57				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3875	517361	115166
	AUDITORIUM				1939	MASONRY BEARING WALLS	CONCRETE, FORMED	1	11824	1947513	139953
	MUSIC BUILDING				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5772	818418	171547
	CLASSROOMS 70-73				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	8528	1064859	253455
	NURSERY				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4385	583561	130324
	CLASSROOMS 82-83				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3288	448741	97720
	CLASSROOMS 84-86				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3288	448741	97720
	CLASSROOMS 87-89				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	3288	448741	97720

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	CLASSROOMS 90-91				1945	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2304	325108	68475
	CAFETERIA				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	9948	1521633	358927
	CLASSROOM 47				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1504	213330	44700
	LIBRARY/CLASSROOMS				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	8356	1175375	647839
	GYM/LOCKERS				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	19076	3198056	396861
	INDUSTRIAL ARTS				1973	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	13000	1756427	623574
	COVERED PASSAGES				1939	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	24900	0
LINCOLN MIDDLE SCHOOL	ADMINISTRATION/CLASSROOMS	1501 CALIFORNIA AVENUE	SANTA MONICA	90403	1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME CONCRETI	2	62577	8948040	1859808
	CLASSROOM 310				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1520	205444	45175
	CLASSROOM 300 WING				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	2	8880	1214412	263916
	CAFETERIA				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	9071	1411425	337480
	GYMNASIUM				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	15084	2527367	313812
	CLASSROOM 500 WING				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	16946	2321581	503640
	POOL/LOCKER ROOMS				1935	MASONRY BEARING WALLS	CONCRETE, FORMED	1	15553	3877417	323568
	CLASSROOM 400 WING				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	7173	1000153	213183
	AUDITORIUM				1925	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	11836	1989608	440326
	COVERED PASSAGES				1970	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	41432	0
MALIBU HIGH SCHOOL	LIBRARY	30215 MORNINGVIEW DRIVE	MALIBU	90265	1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME -BRICK V	1	7585	1116092	1129138
	ADMINISTRATION/CLASSROOMS				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME -BRICK V	1	5760	826868	190995
	CLASSROOMS 101-212				1966	MASONRY BEARING WALLS	BRICK, SOLID	2	27160	3613851	900596
	CLASSROOMS 1-10				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	12627	1716757	418698
	MUSIC BUILDING				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	6649	921441	220473
	INDUSTRIAL ARTS				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	9810	1398555	470558
	MULTI-PURPOSE				1966	MASONRY BEARING WALLS	BRICK, SOLID	1	14121	2312173	525333
	ART BUILDING				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4815	624000	153028
	GYMNASIUM				1966	MASONRY BEARING WALLS	BRICK, SOLID	1	21042	3407275	437763
	CUSTODIANS OFFICE				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1316	171965	22892
	POOL BUILDING				1966	MASONRY BEARING WALLS	CONCRETE BLOCK	1	576	60233	17331
	POOL				1994	MASONRY BEARING WALLS		1	0	204100	0
	PORTABLE CLASSROOM 511				1998	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 512				1998	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM 513				1998	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1966	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	33977	0
SANTA MONICA HIGH SCHOOL	AUXILIARY GYMNASIUM	601 PICO BOULEVARD	SANTA MONICA	90405	1971	MASONRY BEARING WALLS	CONCRETE, FORMED	1	18024	2731290	374974
	POOL BUILDING				1971	MASONRY BEARING WALLS	CONCRETE, FORMED	1	16200	2222188	337027
	MAIN GYMNASIUM				1971	MASONRY BEARING WALLS	CONCRETE, FORMED	1	23880	3902884	496804
	MUSIC BUILDING				1930	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	7648	978573	253533

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	AUDITORIUM				1930	MASONRY BEARING WALLS	CONCRETE, FORMED	1	14155	2461664	167542
	ADMINISTRATION				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	CONCRETE BLOCK -STUCCO ON WO	1	12488	1804726	468397
	CAFETERIA				1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	CONCRETE BLOCK -STUCCO ON WO	1	14809	2376716	550928
	BUSINESS BUILDING				1930	MASONRY BEARING WALLS	CONCRETE, FORMED	2	17722	2445927	567641
	HISTORY BUILDING				1930	MASONRY BEARING WALLS	CONCRETE, FORMED	2	42098	5928332	1385922
	ART BUILDING				1930	MASONRY BEARING WALLS	CONCRETE, FORMED	2	4800	690332	159162
	ENGLISH BUILDING				1930	MASONRY BEARING WALLS	CONCRETE, FORMED	2	29510	4042823	978517
	CLASSROOM T				1930	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1400	196022	46422
	SCIENCE BUILDING				1960	MASONRY BEARING WALLS	CONCRETE, PRECAST PANELS	2	27968	4028131	927388
	TECHNICAL BUILDING				1960	MASONRY BEARING WALLS	CONCRETE, FORMED	2	53760	7964205	1782821
	LANGUAGE BUILDING				1930	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	2	35572	4868360	1179528
	STORAGE GARAGE				1965	MASONRY BEARING WALLS	CONCRETE BLOCK	1	724	41633	21784
	CLASSROOM B205				1930	MASONRY BEARING WALLS	CONCRETE, FORMED	1	1300	173110	43107
	COVERED PASSAGES				1960	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	15214	0
CHILD DEVELOPMENT SERVICES	ADMINISTRATION/CLASSROOMS	2802 FOURTH STREET			1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	9722	1335476	0
	CHILD DEVELOPMENT SERVICES				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	11143	1735234	414545
	ADMINISTRATIVE SERVICES				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	1780	246746	45652
	COVERED PASSAGES				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	13185	0
LEASED CHILD CARE	CHILD CARE CENTER	401 ASHLAND AVENUE			1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	2	5742	743405	148230
	CHILD CARE CENTER				1946	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2850	387774	73574
DISTRICT OFFICE	MAIN BUILDING	1651 16TH STREET			1985	MASONRY BEARING WALLS	CONCRETE, FORMED	2	41062	5513784	1609192
	COVERED PASSAGES				1985	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	10548	0
TRANSPORTATION YARD	BUS YARD OFFICE	1809 OLYMPIC BOULEVARD			1970	METAL FRAME WALLS	CONCRETE BLOCK -METAL SIDING	2	3200	327872	75419
MALIBU MAINT/TRANSPORTATION	MAINTENANCE BUILDING		MALIBU	90265	1970	METAL FRAME WALLS	METAL SIDING	1	3200	312529	75419
	BUS GARAGE				1970	METAL FRAME WALLS	METAL SIDING	1	5200	514092	122558
PT. DUME ELEMENTARY	BUILDING A	6955 FERNHILL ROAD			1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME STUD WAL	1	7188	963608	165559
	BUILDING B				1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2304	314886	343880
	BUILDING C				1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	5397	736918	200780
	BUILDING D				1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	2700	367877	69701
	BUILDING E				1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME STUD WAL	1	2880	399748	74348
	BUILDING F				1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME STUD WAL	1	2920	404739	75380
	COVERED PASSAGES				1972	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	25356	0
JOHN MUIR/SMASH	ADMINISTRATION	2526 6TH STREET	SANTA MONICA	90404	1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	2	8372	862664	274104
	MULTI-PURPOSE/CLASSROOMS				1997	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	2	15639	1797728	493048
	CLASSROOM BUILDING 500				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	2	9172	993079	275688
	CLASSROOM BUILDING 600				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	2	9172	993079	275688
	CLASSROOM 440				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	1	720	86999	21642

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	STORAGE				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	1	361	18520	14754
	RESTROOM BUILDING				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	SINGLE -STUCCO ON WOOD FR	1	361	63818	1798
	PORTABLE CLASSROOM A				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM B				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM C				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	PORTABLE CLASSROOM D				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUD WALLS-WOOD SIDING	1	960	52800	20650
	COVERED PASSAGES				1996	WOOD OR STEEL STUD FRAME EXTERIOR WALLS		1	0	33644	0
LINCOLN CHILD DEVELOP CTR	CHILD CARE	1501 CALIFORNIA AVENUE	SANTA MONICA	90403	1950	WOOD OR STEEL STUD FRAME EXTERIOR WALLS	STUCCO ON WOOD FRAME	1	4976	696218	128456
										181613227	41336137

Proposition X/State Facility Program Budget R-16 1999-2004

PROPOSITION X / STATE FACILITY PROGRAM BUDGET R-16

	A	B	C	D	E	F	G	H	I	J	K	L
1		Revision: 3/27/2004	ESTIMATED							REVENUES		
2			BUDGET	Developer Fees/ D.F. Interest	Decker Canyon & Big Rock Property Sale	Deferred Maintenance	FEMA - EQ	City of S.M; Weingart-B.H.; Restore BH	Prop X - Interest (C)	Prop X - Stand Alone (C)	Prop X - District Match	State: Modern.& New Const. Funds
4	I. REVENUES		**94,456,896**	**3,152,958**	**492,685**	**1,233,572**	**734,162**	**1,283,213**	**5,329,284**	**29,737,397**	**12,262,637**	**40,230,988**
5	A. State Modernization & Local 20% Match Revenue											
6		Cabrillo - SAB 1-26-00	1,111,011								222,202	888,809
7		Edison - SAB 1-26-00	958,635								191,727	766,908
8		Franklin - SAB 1-26-00	2,597,339								519,468	2,077,871
9		Grant - SAB 1-26-00	1,924,668								384,934	1,539,734
10		McKinley - SAB 1-26-00	1,303,330								260,666	1,042,664
11		Pt. Dume - SAB 1-26-00	742,646								148,529	594,117
12		Rogers - SAB 1-26-00	2,103,671								420,734	1,682,937
13		Roosevelt - SAB 1-26-00	2,202,790								440,558	1,762,232
14		Webster - SAB 1-26-00	1,257,469								251,494	1,005,975
15		Adams - SAB 1-26-00	3,468,666								693,733	2,774,933
16		Lincoln - SAB 1-26-00	4,395,459								879,092	3,516,367
17		Malibu HS - SAB 1-26-00	4,886,024								977,205	3,908,819
18		Santa Monica HS - SAB 1-26-00	15,105,844					1,100,000			1,921,169	12,084,675
19		Olympic HS - SAB 1-26-00	434,663								86,933	347,730
20	B. State New Construction & Local 50% Match Revenue											
21		Malibu HS	5,902,780	529,232	492,685						1,929,473	2,951,390
22		Santa Monica HS	6,571,654	351,106							2,934,721	3,285,827
23	C. DEVELOPER FEES (Based on Approved Plan)											
24		SMASH - 1 Classroom	244,805	244,805								
25		SMASH - 2 Classrooms	421,687	421,687								
26		Santa Monica H.S.- 2 Classrooms	0	Incl. Above								
27		Muir - 2 Classroom	429,176	429,176								
28		Roosevelt - 3 Classrooms	647,704	647,704								
29		Pt. Dume - Modernization	252,091	252,091								
30		Malibu HS - 1 Classroom	0	Incl. Above								
31		Webster - 1 Classroom	277,157	277,157								
32	D. FEMA- EQ											
33		Lincoln - Auditorium	248,276				248,276					
34		Lincoln - Pool	485,886				485,886					
35	E. DEFERRED MAINTENANCE FUNDS											
36		Pt. Dume	1,233,572			1,233,572						
37	F. OTHER											
38		Barnum Hall-II-Restore B.H. Com.	183,213					183,213				
39		Malibu HS-Decker Canyon/Big Rock	0		Incl. Above							
40	EXPENDITURES											
41	Cabrillo											
42		Prop X - Additional Classrooms - 2 Standard Relos.	276,756							276,756		
43		State Modernization - General	1,111,011								222,202	888,809
44		**Prop X -Playgrounds**	**54,699**							**54,699**		
45	Edison											
46		Prop X - Additional Classrooms - 1 Standard Relo.	106,969							106,969		
47		Prop X - Additional Classrooms - 1 Panelized	237,733							237,733		
48		**State Modernization - General**	**958,635**								**191,727**	**766,908**

	A	B	C	D	E	F	G	H	I	J	K	L
1		**Revision: 3/27/2004**	**ESTIMATED**							**REVENUES**		
2			**BUDGET**	**Developer Fees/ D.F. Interest**	**Decker Canyon & Big Rock Property Sale**	**Deferred Maintenance**	**FEMA - EQ**	**City of S.M; Weingart- B.H.; Restore BH**	**Prop X - Interest (C)**	**Prop X - Stand Alone (C)**	**Prop X - District Match**	**State: Modern.& New Const. Funds**
49	Franklin											
50		Prop X - Additional Classrooms - 3 One Story Pan./3 Standard Relos	988,920							988,920		
51		**State Modernization - General (A)**	**2,597,339**								**519,468**	**2,077,871**
52		Balance of 1, 1997-98 Standard Relo.	54,120							54,120		
53	Grant											
54		Prop X - Additional Classrooms - 4 One Story Pan.	626,908							626,908		
55		State Modernization - General	1,924,668								384,934	1,539,734
56		Balance of 2, 1997-98 Standard Relo.	108,240							108,240		
57		Balance of 1, 1998-99 Standard Relo.	65,811							65,811		
58	McKinley											
59		Prop X - Additional Classrooms - 2 One Story Pan.	422,985							422,985		
60		**State Modernization - General (A)**	**1,303,330**								**260,666**	**1,042,664**
61	Muir											
62		Dev. Fee+Prop X-Add. Clsrms- 2 One Story Pan.	429,176	429,176						0		
63		Balance of 1, 1998-99 Standard Relo.	65,811							65,811		
64	Pt. Dume											
65		Prop X - Modernization	225,284							225,284		
66		Deferred Maintenance	1,233,572			1,233,572						
67		Dev. Fee - Modernization	252,091	252,091								
68		State Modernization - General	742,646								148,529	594,117
69	Rogers											
70		Prop X - Additional Classrooms - 5 One Story Pan.	764,255							764,255		
71		State Modernization - General	2,103,671								420,734	1,682,937
72		Balance of 2, 1997-98 Standard Relo.	108,240							108,240		
73	Roosevelt											
74		Dev. Fee+Prop X-Add. Clsrms-6 Two Story Perm. (B)	1,072,501	647,704						424,797		
75		State Modernization - General (B)	2,202,790								440,558	1,762,232
76		Balance of 2, 1997-98 Standard Relo.	108,240							108,240		
77	SMASH											
78		Developer Fees - Portion of 3 Classrooms	666,492	666,492								
79		Prop X - Portion of 3 Classrooms	407,767						175,000	232,768		
80	Webster											
81		Prop X - Additional Classrooms - 1 Standard Relo	132,591							132,591		
82		Dev. Fee - Additional Classrooms- 1 Panalized	277,157	277,157								
83		State Modernization - General	1,352,469							95,000	251,494	1,005,975

	A	B	C	D	E	F	G	H	I	J	K	L
1		**Revision: 3/27/2004**	**ESTIMATED**							**REVENUES**		
2			**BUDGET**	**Developer Fees/ D.F. Interest**	**Decker Canyon & Big Rock Property Sale**	**Deferred Maintenance**	**FEMA - EQ**	**City of S.M; Weingart-B.H.; Restore BH**	**Prop X - Interest (C)**	**Prop X - Stand Alone (C)**	**Prop X - District Match**	**State: Modern.& New Const. Funds**
84	Adams											
85		State Modernization - General	3,468,666								693,733	2,774,933
86	Lincoln											
87		State Modernization - Auditorium	223,649								44,730	178,919
88		FEMA EQ - Auditorium	248,276				248,276					
89		State Modernization - Pool	1,239,818								247,964	991,854
90		FEMA EQ - Pool	485,886				485,886					
91		State Modernization - General	2,931,992								586,398	2,345,593
92	Malibu HS											
93		**State Modernization-Track/Parking**	**1,779,422**							**40,998**	**347,685**	**1,390,739**
94		**State New - Classroom Bldg**	**3,354,550**	**529,232**	**492,685**						**655,358**	**1,677,275**
95		State New - Gym (E)	7,291,232						970,000	3,773,002	1,274,115	1,274,115
96		**State Modernization-Auditorium (E)**	**2,878,042**							**699,248**	**435,759**	**1,743,035**
97		State Modernization-Gen (E)	321,865								64,373	257,492
98		State Modernization-Underground U.	646,941								129,388	517,553
99		Prop X - Classroom Bldg-Underground	146,903							146,903		
100		Prop X - Gym-Underground U.	82,223							82,223		
101	Santa Monica HS											
102		State Modernization-Barnum Hall-I	1,665,505					333,101				1,332,404
103		**State Modernization-Barnum-Hall II**	**3,662,581**					**686,899**		**45,616**	**0**	**2,930,066**
104		State New-Barnum Hall-IIA	1,658,382					80,000		0	789,191	789,191
105		Prop X/Fund R. Com.-Barnum Hall	183,213					183,213				
106		**State Modernization-S. Gym Basement**	**448,993**								**89,799**	**359,194**
107		**State Modernization-Gen**	**9,294,381**								**1,831,370**	**7,463,011**
108		State New-Music Bldg (D)	2,947,318								1,473,659	1,473,659
109		State New-Additional Classrooms (D)	1,974,900	351,106							636,344	987,450
110		**New State- Unidentified Projects (D)**	**71,054**								**35,527**	**35,527**
111		**Prop X - Unidentified Projects (D)**	**3,554,439**						**2,753,770**	**800,669**		
112	Olympic HS											
113		Prop X - Modernization	1,688,924							1,688,924		
114		State Modernization - General	434,663								86,933	347,730
115	Washington West - CDS											
116		Pine Street CDS Center	578,162							578,162		
117		Washington West - Renovation	1,921,838							1,921,838		
118	**Playfields/Recreation Projects**		**5,044,400**							**5,044,400**		
119		Cabrillo										
120		Edison										
121		Franklin										
122		Grant										
123		McKinley										
124		Pt. Dume										
125		Rogers										
126		Roosevelt										
127		Muir/SMASH										
128		Webster										
129		Adams										
130		Lincoln										
131	**Contingency -Unforseen Site Conditions-M**		**449,894**							**449,894**		
132	Contingency -Unforseen Site Conditions-S.M.											
133		Adams - Auditorium Roof (F)	603,524							603,524		
134		Adams - Auditorium Cafeteria (F)	622,888							622,888		
135	Transportation Facility Acquisition		3,500,000							3,500,000		
136	Unfunded Earthquake Repairs		1,000,000							1,000,000		
137	District Administration		1,000,000							1,000,000		
138	Unidentified Projects - For BLA #4-Amend. 7.2		127,442							127,442		
139	**Unidentified Projects**		**3,942,053**	**0**	**0**	**0**	**0**	**0**	**1,430,514**	**2,511,539**	**0**	**0**
140												
141												
142			94,456,896	3,152,958	492,685	1,233,572	734,162	1,283,213	5,329,284	29,737,397	12,262,637	40,230,989
143												
144												

SMMUSD Modernization

Proposition ES Modernization 1991-1998

Building for the Future; Final Report of the Proposition ES School reconstruction Project

The Public Schools of the Santa Monica and Malibu Communities

Santa Monica and Malibu have a unique physical beauty, but the thing that separates Santa Monica and Malibu from other cities is its school system, a source of pride for the whole community. Our schools are truly our shining jewels and with Proposition ES we have polished up our jewels. William S. Mortensen Chairman-Emeritus of the Board First Federal Bank.

Eight years ago, voters of the Santa Monica and Malibu communities strongly supported a $75 million bond levy, the purpose of which was to renovate most of the facilities in their public school system. Many of the school buildings were in deterioration condition and in need of safety and access upgrades, asbestos removal, earthquake damage prevention, and other essential physical improvements.

The effort to secure funding for this long overdue work began in the late-1980s with formation of Citizens for Safe Schools, which created a plan leading to Proposition ES, the 1990 ballot measure that garnered a 74% favorable vote. Added funding from developers fees and interest income brought the total to $100 million.

Considerably more-about $130 million-was actually needed to bring all of the district's facilities into good shape but the Board of Education judiciously chose to draw the line at a figure, which seemed reasonable, knowing more work would have to be funded at a later date.

The board worked with community and school leaders, parents, teachers, and architects to set five programmatic priorities:

- To make the schools of Santa Monica and Malibu safe and sound for the children and their teachers.
- To insure that the schools meet every federal, state and local requirement for safety, educational standards and equal access.
- To bring each facility into a state of good repair so that with adequate maintenance, it would last for its scheduled lifetime.
- To provide facilities needed to maintain the current level of educational programming.
- To rebuild the schools of Santa Monica and Malibu to meet the needs of the 21st century.

A citizen-based oversight committee was appointed, project staff hired, the master plan refined, specifications created, bids solicited, architects and contractors interviewed, contracts signed, and the project was underway by the summer of 1991.

Now after more than a decade of planning and building the dream of better school facilities has almost come true. The ES project has returned enormous value for the money and effort Santa Monica and Malibu taxpayers have spent on it.

The district's facilities now enhance educational programs, provide more safety and equity for all students, help attract high quality teachers, administrators and support staff, and assure the capacity for technological advancements.

To fulfill the promise of Proposition ES, the reconstruction project was comprised of more than sixty major improvements at fourteen of the Santa Monica-Malibu district's schools, inside and outside the buildings. The derived benefits include:

Safety

- Asbestos removal
- New fire and entry alarm systems
- New telephone, public address and intercom systems
- Earthquake-proofed windows
- Seismically-braced bookshelves
- Hazardous playground equipment removal
- Deteriorated carpet and cracked tile replacement
- Updated mechanical, electrical, plumbing, and heating systems
- Automatic gas shutoff valves

Accessibility

- New handicap access ramps and hand rails
- New elevators and wheelchair lifts
- Bathroom redesign for handicap access and use
- Library book stack aisles widened

Equity

- Comparable educational and recreational facilities in all schools
- Equalized access to gymnasiums and playing fields for female and male students

Learning Capability

- A wholly new school complex
- New classroom buildings
- New multipurpose buildings
- Upgraded classrooms with new lighting, wiring, counters, sinks and flooring
- New, expanded and renovated child development centers\
- New science laboratories
- New technology centers
- Computer networking and Internet access
- Renovated gymnasiums
- New and renovated music rooms
- New and upgraded play areas

Other facility improvements

- New roofing
- Renovated bathrooms
- Interior and exterior painting
- New carpeting and tiling
- Redesigned entries
- Renovated administrative areas

- New, standardized signage
- New landscaping and parking areas

Even though the ES reconstruction project was carefully and thoroughly planned and executed, not everything needed for the improvement of the district's facilities was able to be anticipated or included.

Significant unforeseen circumstances, which have had a dramatic impact on the project.

- The 1994 earthquake extended the duration of the project and increased the district's costs, not all of them covered by FEMA.

- The Americans with Disabilities Act was passed midstream, thus adding new requirements for handicap access.

- Due to the age of some buildings, renovations beyond those expected were necessary, such as termite damage and broken water valves.

- Enrollment at the district's sixteen schools has grown from 9,2898 students in 1990 to 11,936 students in 1998, and increase of 25%.

- The State mandate for class-size reduction in kindergarten through grade three has created demands for new and expanded learning facilities, equivalent to three new elementary schools or sixty new classroom bungalows.

Despite the above limitations, the ES project has been a tremendous success, and continued improvements are anticipated.

Following are profiles of the Santa Monica and Malibu schools renovated with ES funds:

Juan Cabrillo School

The Campus: The Juan Cabrillo School consists of seven permanent buildings, totaling about 32,000 square fete of floor space. The well-landscaped campus is adjacent to the Malibu High School campus.

Construction Chronology:

1954-classroom building
1956-classroom building
1958-administration building
1958-classroom building
1961-classroom building
1965-library building
1995-multipurpose building

ES Project Improvements:

- New multipurpose building
- New preschool/childcare facility
- Refurbished kindergarten wing
- Refurbished library
- Refurbished classroom buildings

- Two new classroom
- Roof repair and waterproofing
- New safety and mechanical systems
- Refurnished administrative area
- Renovated playground

ES Financial Summary:

Construction	$3,048,211.00
Professional Fees	$ 383,335.00
Permits and Fees	$ 267,667.00
Total	$3,701,213.00

Edison Elementary School:

The Edison School, unique for its dual Spanish-English immersion program, consists of thirteen permanent buildings, totaling about 24,000 square feet of floor space, plus four relocatable classrooms.

Construction Chronology

1950-51 – original buildings
1954 – multipurpose room
1954 – classroom building
1969 – library building
1975 – relocatable classrooms
1995 – relocatable classrooms

ES Project Improvements

- New kindergarten, preschool, and childcare complex
- Refurbished cafeteria
- Refurbished classrooms
- Thirteen new classrooms
- New playing fields
- New safety, electrical, plumbing and mechanical systems
- Refurbished administrative area
- Renovated parking area

ES Financial Summary

Construction	$2,424,208.00
Professional Fees	$ 269,424.00
Permits and Fees	$ 226,135.00
Total	$$2,919,767.00

Franklin Elementary School

The Campus: The Franklin School is distinguished by its inquiry-based science program. Is campus is graced by gardens along the front walkway and consists of seven permanent buildings, containing about 51,000 square feet.

Construction Chronology: The original building, built in the early 1930s, was substantially renovated after the Long Beach earthquake. Added since then:

1937 – classroom building
1948 – multipurpose building
1952 – administration building
1952 – classroom building

1965 – library

ES Project Improvements:

- Renovated main building with new elevator and wheel-chair ramps
- Upgraded classrooms
- Four new relocated classrooms
- Refurbished kindergarten building, cafeteria, and administrative area
- New front walkway and gardens
- Expanded parking lot
- New security gate

ES Financial Summary:

Construction	$2,851,162.00
Professional Fees	$ 285,988.00
Permits and Fees	$ 251,004.00
Total	$3,388,154.00

Grant Elementary School

The Campus: The Grant School was established over sixty years ago and now consists of ten permanent buildings, with 48,000 square feet of floor space. The campus is located in Sunset Park.

Construction Chronology:

1936 – administration building
1936 – cafeteria
1936 – two classroom buildings
1939 – kindergarten building
1945 – auditorium
1954 – two classroom buildings
1965 – library

ES Project Improvements

- Refurbished and upgraded classrooms
- New classroom bungalows
- Renovated child care center
- Refurbished library
- New kindergarten play area
- Refurbished administrative offices
- New safety and mechanical systems
- Handicap accessibility

- Renovated parking area

ES Financial Summary:

Construction	$3,360,678.00
Professional Fees	$ 555,596.00
Permits and Fees	$ 228,654.00
Total	$4,154,928.00

McKinley Elementary School

The campus: The McKinley School was established over sixty years ago. The four permanent buildings comprise 49,000 square feet, and the beautifully landscaped campus is highlighted by Spanish-style architecture.

Construction Chronology: The two original two-story buildings, with Spanish-style tile roofs, were built in 1936. Added since then were two additional permanent buildings and eight relocatable classrooms. The originals buildings were previously renovated in 1973.

ES Project Improvements:

- Upgraded classrooms
- Three new child care and special education buildings
- Five new classroom buildings
- Kindergarten play area
- New administrative area
- New safety and mechanical systems
- New elevator in main building
- Refurbished administrative building
- Expanded parking area

ES Financial Summary:

Construction	$2,691,027.00
Professional Fees	$ 789,646.00
Permits and Fees	$ 517,216.00
Total	$3,211,909.00

John Muir Elementary School. Santa Monica Alternative School House (SMASH)

The campus: This wholly new complex was built to house two schools, Muir and SMASH, adjacent to Los Amigos park. The award-winning design includes four buildings, with 42,338 square feet, three new childcare and preschool classrooms, tennis and basketball courts, and two parking areas. The buildings are separated from the park/play areas, the school buildings being closed by security fencing, so the play area can be open to the community when school is not in session.

ES Financial Summary:

Construction	$6,049,486.00
Professional Fees	$ 789,646.00
Permits and Fees	$ 517,216.00
Total	$7,346,348.00

Rogers Elementary School

The campus: The Will Rogers Elementary School, established fifty years ago, has been distinguished by its selection as a National Blue Ribbon school. The fourteen permanent buildings comprise 42,000 square feet. The campus features classroom gardens and courtyards.

Construction Chronology:

1948 – eight original buildings
1950 – five classroom buildings
1970 – library
1995 – classroom bungalows

ES Project Improvements

- Ten upgraded classrooms, some of which are joined for team-teaching
- Two new classroom bungalows
- New kindergarten room and yard
- Refurbished cafeteria
- Refurbished library
- New administrative area
- New safety and mechanical systems
- New rain gutters
- Outdoor lighting

ES Financial Summary

Construction	$2,686,580.00
Professional Fees	$ 400,296.00
Permits and Fees	$ 149,709.00
Total	$3,236,585.00

Roosevelt Elementary School

The campus: Roosevelt, designated as a California Distinguished School, has nine permanent buildings, containing about 41,000 square feet of floor space and has a beautifully landscaped campus.

Construction Chronology:

1934 – two classroom buildings
1939 – two classroom buildings
1951 – kindergarten building
1958 – classroom building

1968 – two classroom buildings

ES Project Improvements:

- Auditorium and cafeteria repairs
- Refurbished classrooms
- Handicap accessibility, including a wheelchair lift in the auditorium
- New safety and mechanical systems

- Refurbished administrative offices
- New playing fields
- Extensive roof work
- New storage building
- Renovated parking area

ES Financial Summary:

Construction	$3,228,167.00
Professional Fees	$ 362,817.00
Permits and Fees	$ 252,114.00
Total	$3,853,098.00

Webster Elementary School

The campus: The Webster School consists of eight permanent buildings, totaling about 29,000 square feet of floor space. The campus is nestled into Malibu Canyon and features floral bushes and a Poet's Garden.

Construction Chronology:

1948- two original buildings
1952 – cafeteria
1952 – multipurpose room
1952 – kindergarten building
1961 – two classroom buildings

ES Project Improvements:

- Refurbished kindergarten play yard, with new equipment
- New cafeteria, with a safety window wall
- Refurbished classrooms
- New safety and mechanical systems
- Handicap access
- Remodeled administrative offices
- Expanded parking area
- Extensive roof work

ES Financial Summary

Construction	$2,062,518.00
Professional Fees	$ 312,642.00
Permits and Fees	$ 186,138.00
Total	$2,561,298.00

John Adams Middle School

The campus: The John Adams School, sixty-three years old, is distinguished by its Science Magnet Program. The twenty-three permanent buildings comprise 127,000 square feet. The campus, with spacious lawns and playing fields, covers four city blocks.

Construction Chronology

1935 – five original buildings
1938 – two classroom buildings
1940 – auditorium
1948 – multi-use building
1953 – five classroom buildings
1954 – cafeteria
1968 – music building and shops

ES Project Improvements:

- New four-room science building
- Upgraded classrooms
- Renovated gym and playing fields
- New front entryway
- New child development center
- Major library renovations
- New safety and mechanical systems
- Handicap accessibility
- Parking area renovation
- New roofing

ES Financial Summary

Construction	$7,450,736.00
Professional Fees	$1,284,663.00
Permits and Fees	$ 373,722.00
Total	$9,109,121.00

Lincoln Middle School

The campus: Now a California Distinguished School and a member of the national Coalition of Essential Schools, Lincoln began seventy-four years ago. The campus, comprises ten permanent buildings with 141,000 square feet.

Construction Chronology:

1924 – original building
1936 – two classroom buildings
1936 – auditorium and cafeteria
1953 – pool
1958 – gymnasium
1958 – arts and shop buildings
1968 – six relocatable classrooms
1969 – addition to original building

ES Project Improvements

- New science building
- New general purpose classroom
- Upgraded classrooms

- Renovated library
- Renovated cafeteria
- Renovated playing fields
- Remodeled administrative offices
- New safety and mechanical systems
- Handicap accessibility

ES Financial Summary

Construction	$6,760,177.00
Professional Fees	$ 811,383.00
Permits and Fees	$ 388,446.00
Total	$7,960,006.00

Malibu High School

The campus: A middle and high school complex serving grades six through twelve, Malibu High consists of nine permanent buildings, with about 112,000 square feet. The campus includes playing fields and a pool.

Construction Chronology:

1960 – cafeteria
1963 – classroom wing
1963 – music building
1963 - graphic arts building
1968 – administrative offices
1968 – gymnasium

ES Project Improvements:

- New buildings for classroom, science labs, home economics, music, cafeteria, auditorium, gymnasium, library, and administrative offices
- New swimming pool and ball fields
- Outdoor amphitheater
- New safety and mechanical systems
- Handicap accessibility
- New parking area with security gate

ES Financial Summary:

Construction	$7,461,302.00
Professional Fees	$1,113,602.00
Permits and Fees	$ 349,278.00
Total	$8,924,182.00

Santa Monica High School

The campus: Having the feel of a college campus spread over four city blocks, SAMOHI has fourteen permanent buildings, comprising 353,000 square feet of floor space, accented by Art Deco architecture.

Construction Chronology:

1933 – girls' gymnasium
1935 – boys' gymnasium
1936 – three classroom building
1937 – Barnum Hall
1939 – history building
1954 – two classroom buildings
1959 – student center/cafeteria
1959 – music building
1976 – three relocatable buildings

ES Project Improvements:

- New science/technology building
- New child development center
- Renovated buildings for business, music, art, history, language, pool, cafeteria and administrative offices
- Renovated gymnasiums, outdoor basketball courts, and playing fields
- Renovated Mortensen library
- New safety and mechanical systems
- Handicap accessibility

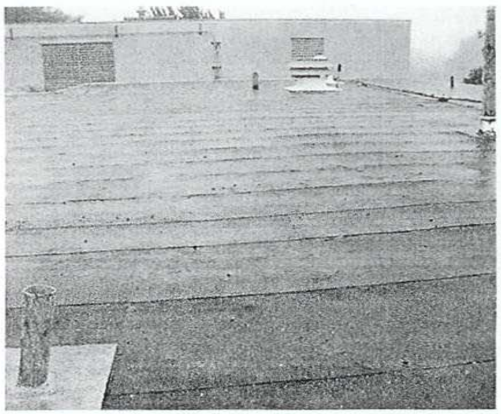
ES Financial Summary:

Construction	$20,003.278.00
Professional Fees	$ 2,697,261.00
Permits and Fees	$ 776,582.00
Total	$23,477,121.00

Santa Monica Malibu Schools

PT. Dume Elementary School

- New ADA ramps installed
- Exterior painting and new roofing
- Restroom renovation
- Window replacement

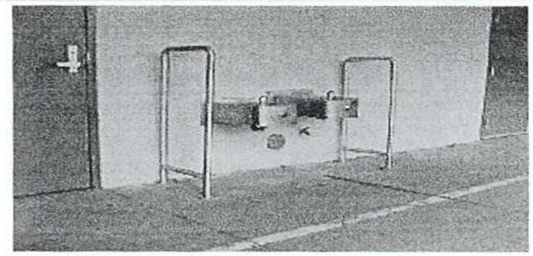


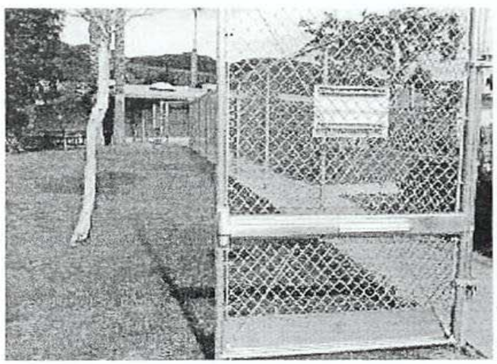
10

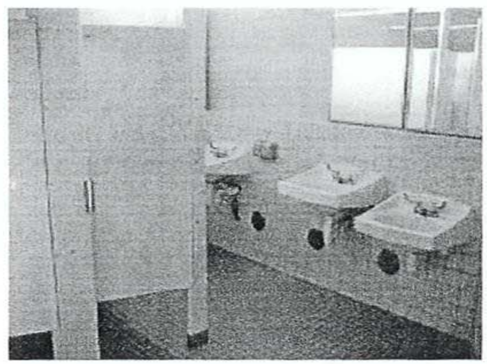
Santa Monica Malibu Schools

Cabrillo Elementary School

- ADA upgrades
- Repaint classrooms
- Replace casework
- Upgrade flooring
- New playground equipment







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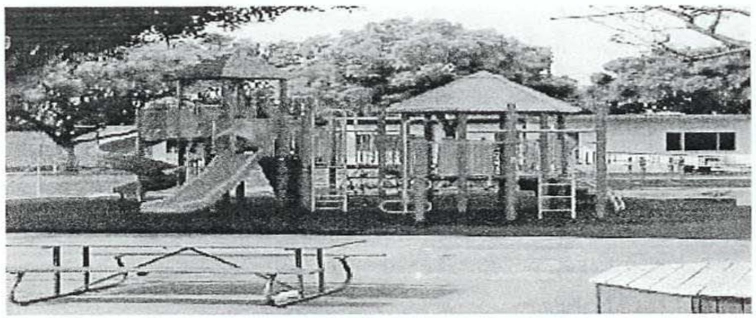
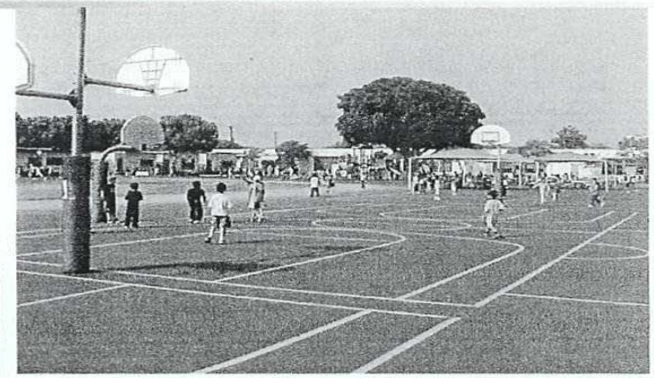
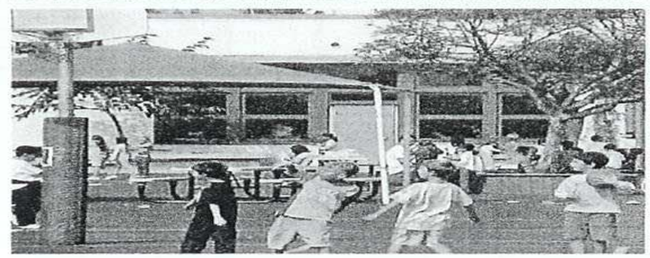
Santa Monica Malibu Schools

Grant Elementary School

- 4 New panelized classrooms
- New Recreation building
- New Grass Playfield
- AUDITORIUM MODERNIZATION







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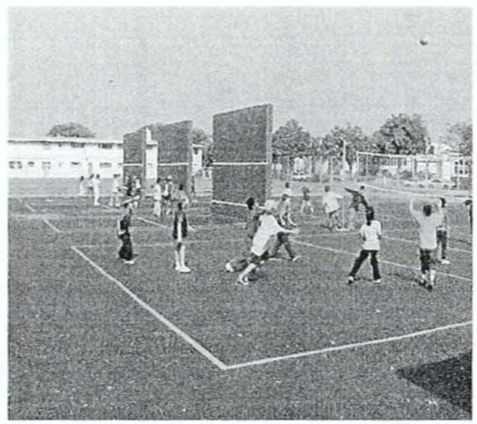
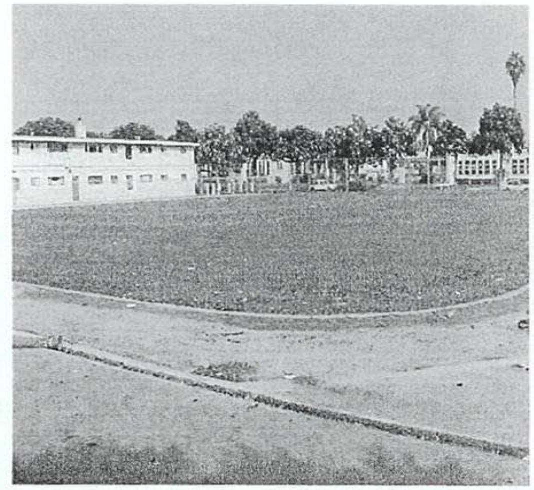
Santa Monica Malibu Schools

Rogers Elementary School

- Modernization including mechanical and electrical upgrades, architectural finishes and ADA upgrades
- New Playground including grass playfield, play structures and walking track



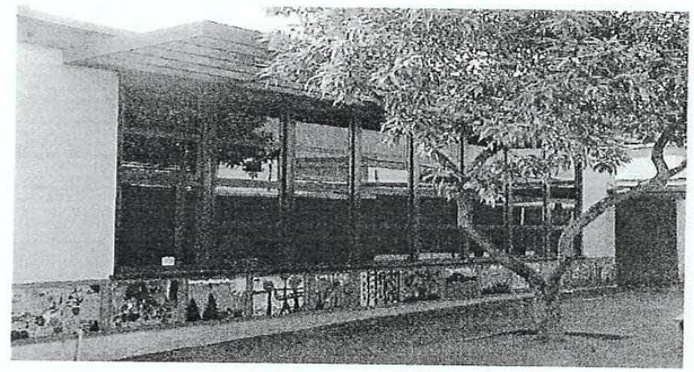


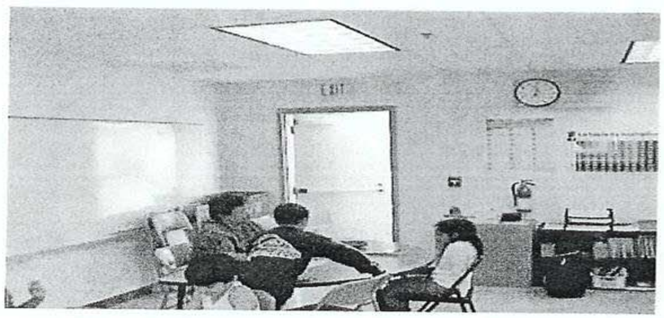
13

Santa Monica Malibu Schools

Edison Elementary School

- Library expansion including one modular building addition
- New relocatable classroom
- New windows
- ADA upgrades
- Electrical and mechanical upgrades



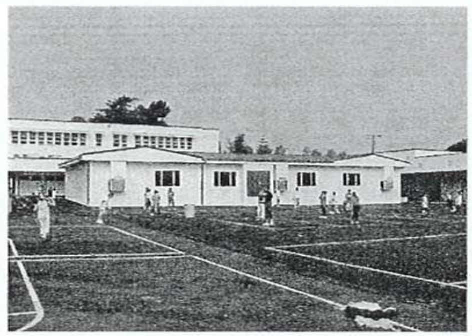


14

Santa Monica Malibu Schools

Franklin Elementary School

- Modernization including doors and hardware, mechanical upgrade, interior finishes and exterior painting
- ADA upgrades
- New playfield and play structure
- 3 New Modular classrooms
- 3 New Relocatable classrooms



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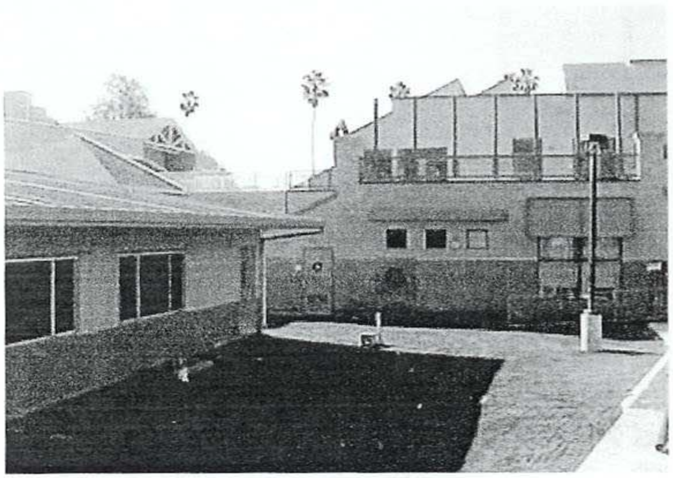
Santa Monica Malibu Schools

Muir Elementary School

- 2 New Modular classrooms

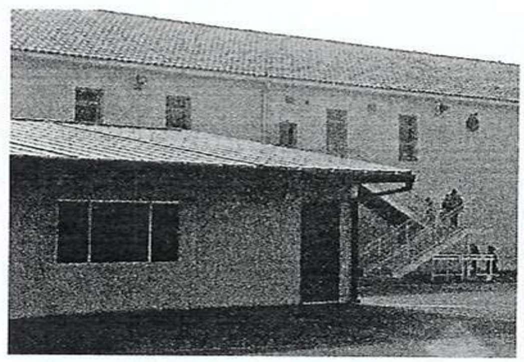


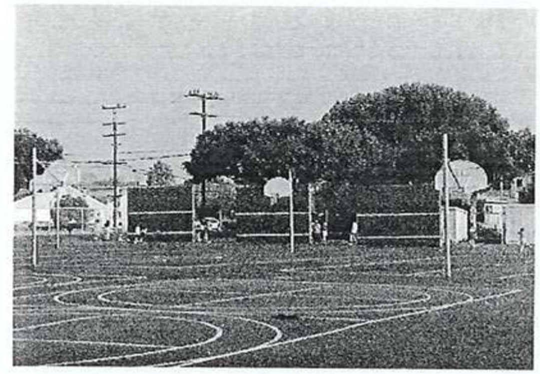
16

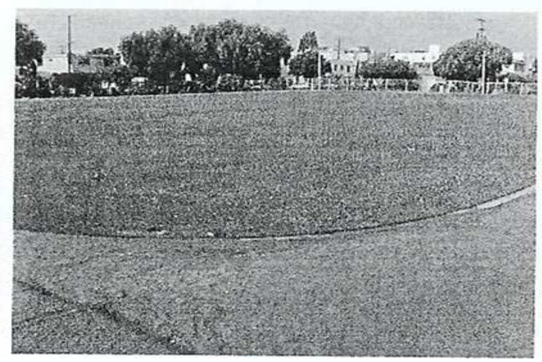
Monica
Malibu Schools

McKinley Elementary School

- Modernization including 2nd floor windows and blinds, painting, flooring, ceilings and mechanical upgrades
- New Playground and play structures
- New decorative metal gates at arches
- ADA upgrades



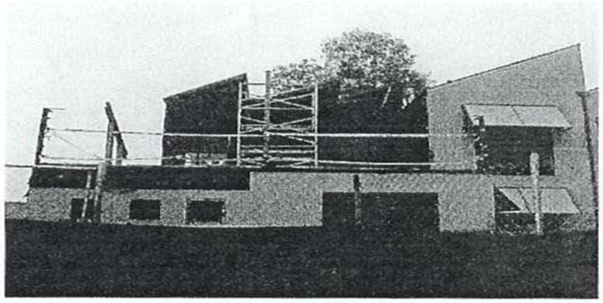


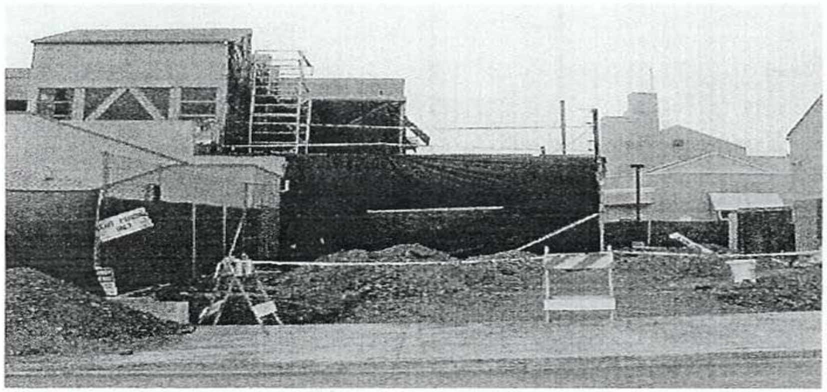


Santa Monica Malibu Schools

Santa Monica Alternative School House - SMASH

- 3 New Classrooms





19

Santa Monica Malibu Schools

Pine Street CDC

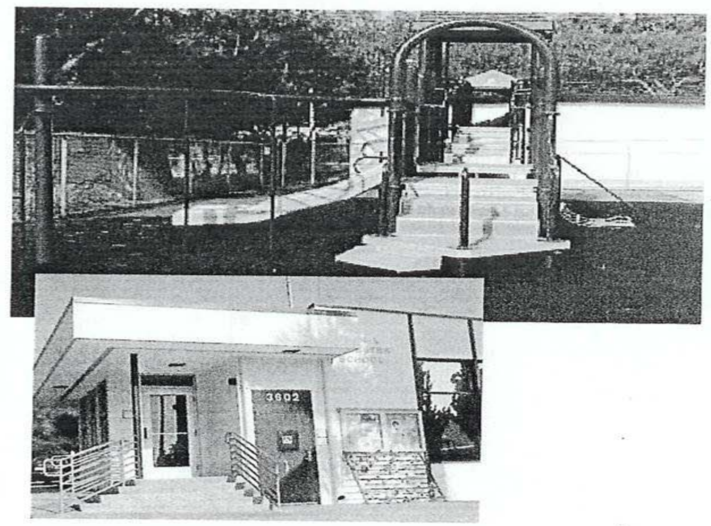
- Refurbish 4 Relocatable classrooms and convert into a child care facility
- New Playground and equipment

20

Santa Monica Malibu Schools

Webster Elementary School

- Modernization including – Library expansion, electrical and mechanical upgrades, ADA upgrades
- Grass playfield and new play structure
- One new modular classroom
- One new relocatable classroom
- New bus drop off area



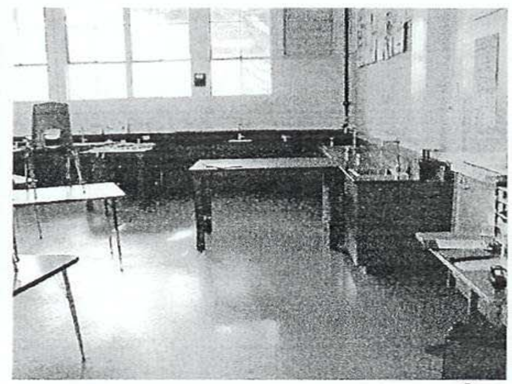
9

Santa Monica Malibu Schools

Lincoln Middle School

Modernization including electrical and mechanical upgrades, ADA and architectural finishes

- Pool renovation and modernization
- Site grading to improve drainage and sidewalk repair.

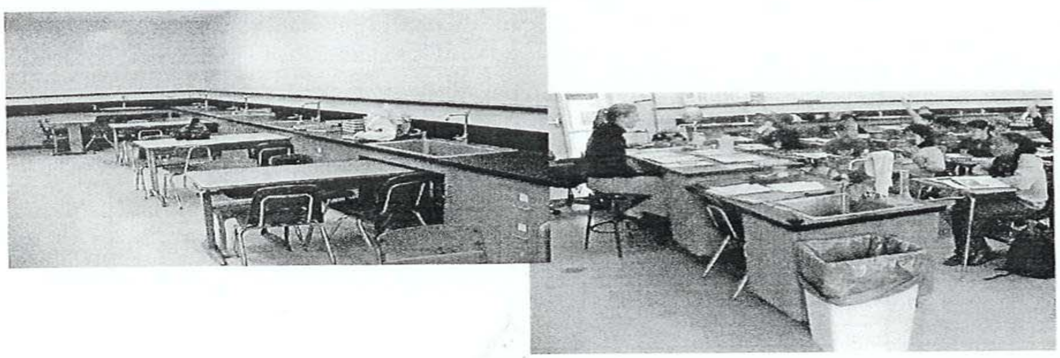


8

Santa Monica Malibu Schools

Adams Middle School

Modernization of classrooms to include, flooring, ceilings, lighting, painting and mechanical units
- ADA upgrades
- Cafeteria modernization and renovation
- Repair and replace doors and lockers at the gymnasium
- New sound system, curtains and stage rigging at the auditorium

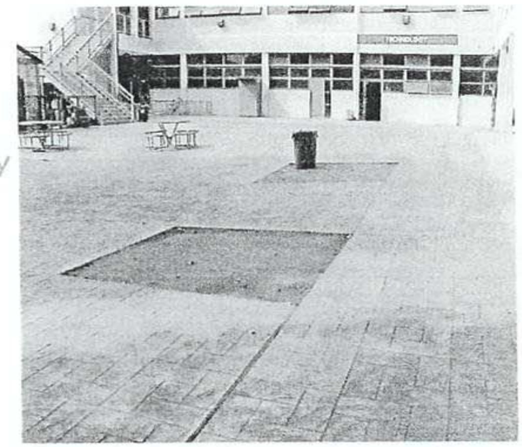


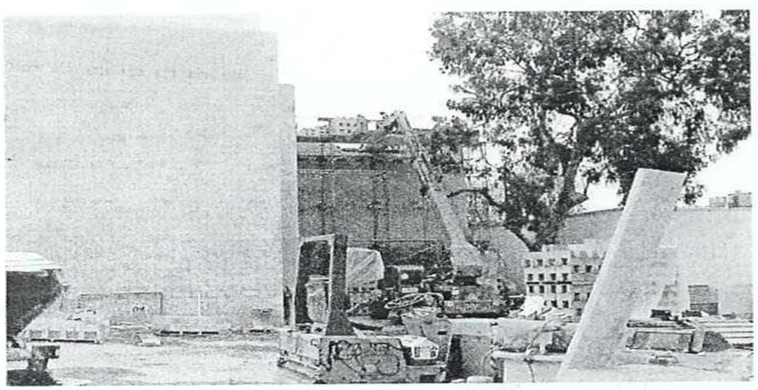
7

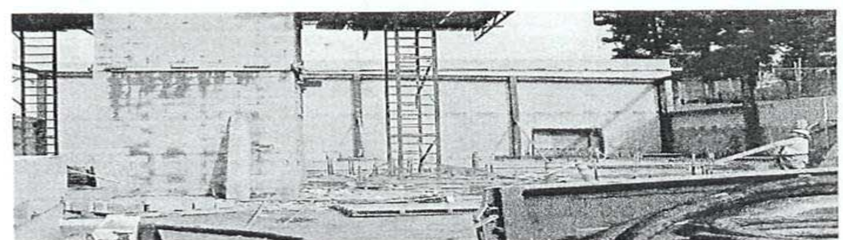
Santa Monica Malibu Schools

Santa Monica High

- Barnum Hall Restoration
- 8 Classroom Addition to the Language building
- New Music building
- Modernization upgrades to the History, Language and Technology buildings plus ADA upgrades
- Refurbish the existing baseball field





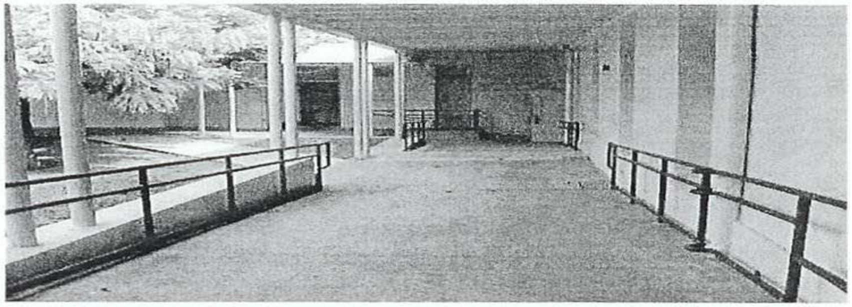


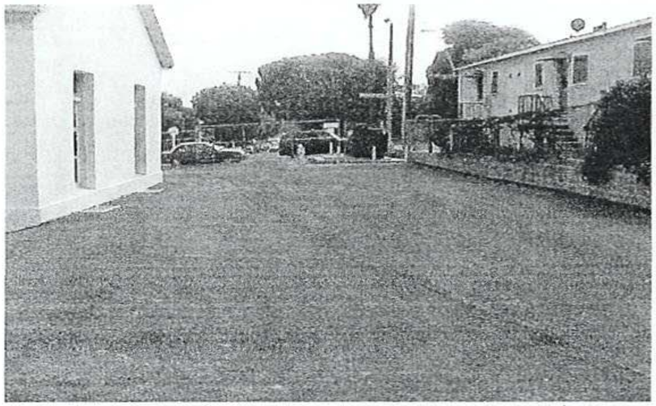
2

Santa Monica Malibu Schools

Olympic High School

Modernization of infrastructure:
- Mechanical systems
- Main electrical
- Replacement of gas lines
- Replacement of water service
- ADA upgrades
- Asbestos abatement



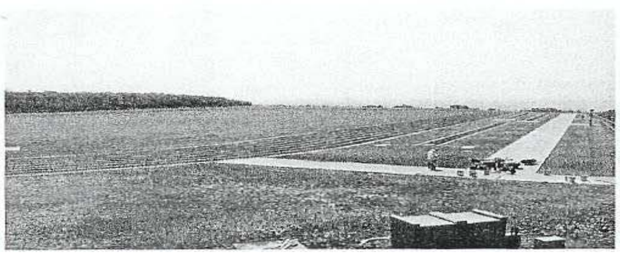


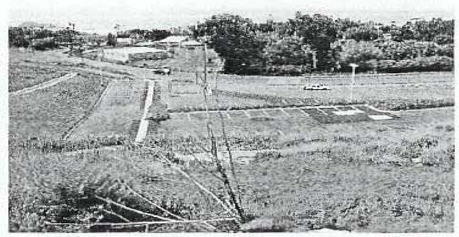
6

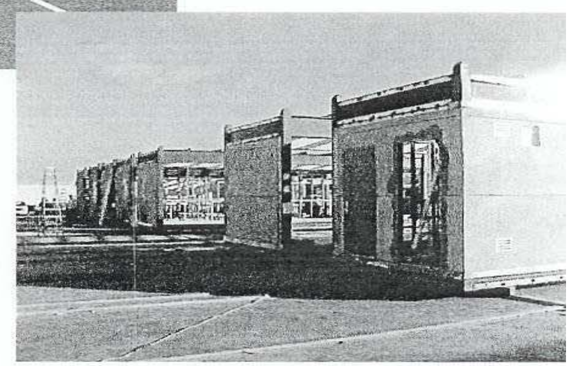
Santa Monica Malibu Schools

Malibu High School

- 12 New Panelized Classrooms
- Conversion of cafeterium into an auditorium with orchestra pit
- ADA upgrades
- New gymnasium
- New track and field facility
- New staff parking lot







Santa Monica College

You've come to a special place. We believe that Santa Monica College offers an outstanding and unique educational experience. We also believe that we provide the community a wealth of resources.

What makes us special? Aside from our academic excellence, we have features unique to us – ranging from the state-of-the-art John Drescher Planetarium to our Academy of Entertainment & Technology with strong ties to Hollywood .

Santa Monica College – a two-year community college accredited by the Western Association of Schools and Colleges – opened in 1929 with just 153 students. It has now grown to a thriving campus with 25,000 students and offerings in more than 80 fields of study.

We have an impressive academic record. We are the leader among the state's 108 community colleges in transferring students to the University of California , University of Southern California and other four-year campuses. We also pride ourselves on preparing students for careers of the 21st century – in such fields as nursing, computer applications, early childhood education, business, accounting, graphic design, and other occupations.

Santa Monica College is one of the most affordable institutions of higher education in the world. Tuition is only $26 a unit for California resident students. And we have an active Financial Aid office that will help you get the funds you need to pay for your college education.

Set on a 38-acre main campus less than two miles from the beach, Santa Monica College has everything today's student needs to succeed – computer labs, athletic facilities, performing and visual arts spaces, and active student clubs. The SMC Library underwent a $23.6 million expansion and modernization and reopened in August 2003 as a state-of-the-art, architecturally praised facility. Our Science Complex, which opened in fall 1999, features the latest in equipment and high-tech labs. Our award-winning faculty works closely with students to ensure their success, and we have numerous student services to help students meet their goals.

Our academic excellence and prime location in a vibrant urban area attract students from all over the world. Santa Monica College boasts one of the largest international student populations of any community college in the nation, with approximately 2,600 from more than 100 countries.

Members of our community are invited to take advantage of a wealth of cultural and recreational offerings, including concerts, plays, art, and photo shows, and lectures. The college has attracted world renowned speakers, including President Clinton.

Our Continuing & Community Education program offers year round a broad range of classes – in such fields as computers, career enhancement, the arts, self development, and fitness. Our widely praised Emeritus College was founded in 1975 to serve people 55 and older by offering classes in downtown Santa Monica and conveniently located community facilities.

SMC also brings the best of public radio to Southern California through the award winning college station KCRW (89.9 FM).

Vision

Santa Monica College:
Changing Lives
Through Excellence In Education

Mission

Santa Monica College strives to create a learning environment that both challenges our students and supports them in achieving their educational goals. We prepare our students to contribute to the global community as they develop an understanding of their personal relationship to the world's social, cultural, political, economic, technological, and natural environments.

To fulfill this mission, the College provides open and affordable access to excellent associate degree and occupational certificate programs. These programs prepare students for successful careers, develop college-level skills, enable transfer to universities, and foster a personal commitment to lifelong learning.

Santa Monica College serves, represents, and embraces the community's racial and cultural diversity. We promote the exchange of ideas in an open, caring community of learners and recognize the critical importance of each individual to the achievement of our vision.

Goals

Student Success:

The College's learning environment will challenge, motivate, and support students. The College will use data on student outcomes to enhance educational programs and services.

Academic Excellence:

The College will uphold its tradition of academic excellence and innovation centered on a strong core of classified staff, faculty, and administrators. All are dedicated to the lifelong development of individual skills and competencies.

Community of Mutual Respect:

The College will be exemplary as a diverse community of mutual respect—a community characterized by respect for the individual, free exchange of ideas, broad collaboration, and participation in college governance.

Effective Use of Technology:

The College will promote access to technology and will use technology to achieve its goals.

Community Partnerships:

The College will develop public/private partnerships to meet the educational needs of our community, ensure financial viability, and promote employment of our students and alumni.

Supportive Physical Environment:

The College will acquire, plan, develop, and maintain facilities and equipment to provide the best possible educational environment and promote the use of sustainable resources.

Approved by Board of Trustees 8/5/2002

Carole L. Currey Chair

Dr. Nancy Greenstein, Vice-Chair

Dr. Susan Aminoff

Dr. Dorothy Ehrhart-Morrison

Dr. Margaret Quiñones

Rob Rader

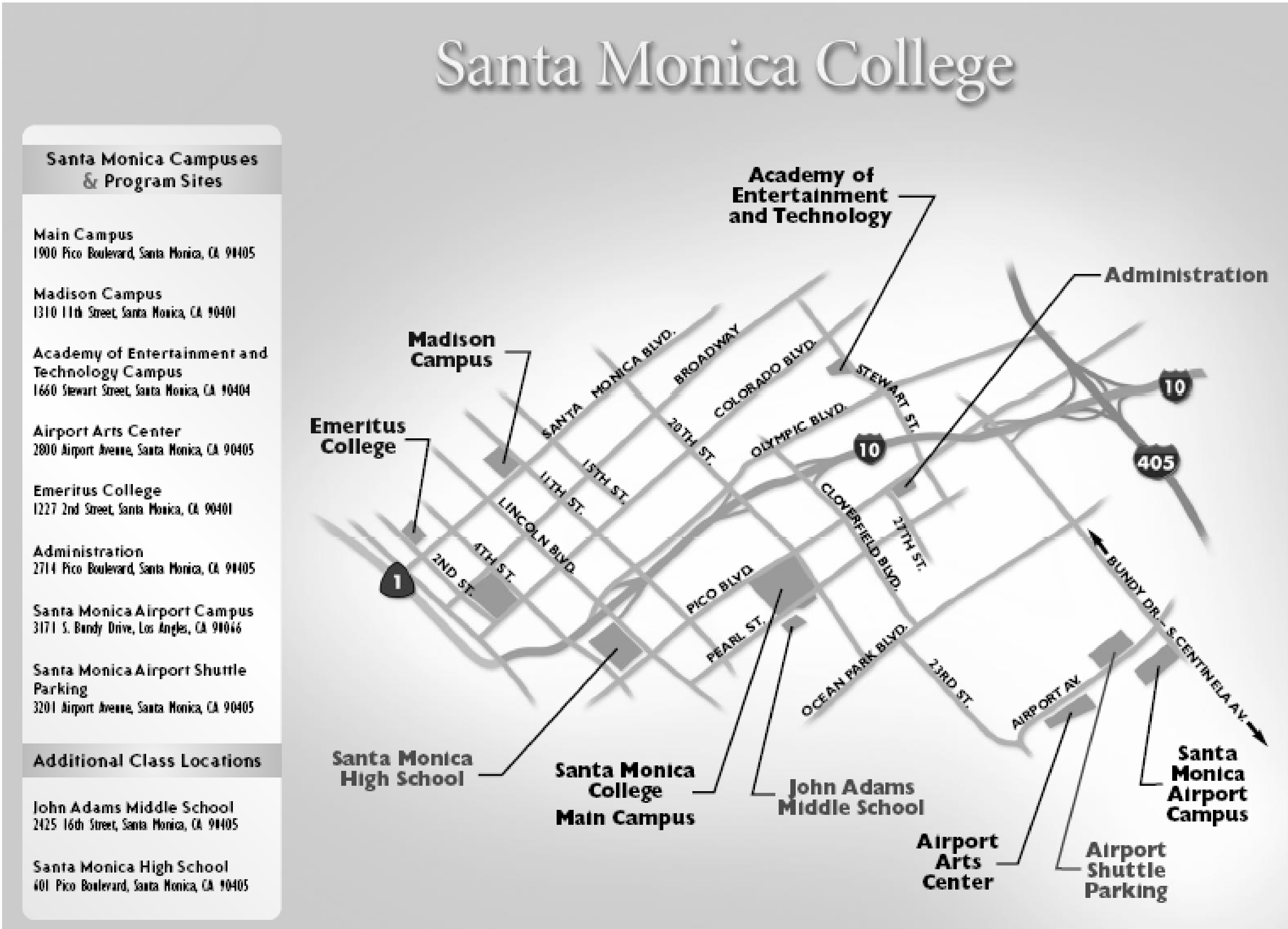
Herbert Roney

Dina Cervantes Student Trustee

The Santa Monica Community College District is governed by a seven-member Board of Trustees elected to four year terms by voters in the district, which serves Santa Monica and Malibu. A student trustee who serves for a one-year term is elected by the Santa Monica College students. The public may contact members of the Board of Trustees in writing c/o Santa Monica College, 1900 Pico Blvd., Santa Monica, CA 90404, or by calling the district office at (310) 434-4200.

Santa Monica College

1. Emeritus College 2. Madison Campus 3. Santa Monica High School 4. Santa Monica College Main Campus 5. Vacant Lot @ 14th & Pico Blvd.
6. Academy of Entertainment and Technology 7. Administration 8. Airport Campus 9. Airport Shuttle Parking 10. Bundy Campus


Santa Monica College
Santa Monica Campuses & Program Sites
Main Campus
1900 Pico Boulevard, Santa Monica, CA 90405
Madison Campus
1310 11th Street, Santa Monica, CA 90401
Academy of Entertainment and Technology Campus
1660 Stewart Street, Santa Monica, CA 90404
Airport Arts Center
2800 Airport Avenue, Santa Monica, CA 90405
Emeritus College
1227 2nd Street, Santa Monica, CA 90401
Administration
2714 Pico Boulevard, Santa Monica, CA 90405
Santa Monica Airport Campus
3171 S. Bundy Drive, Los Angles, CA 90066
Santa Monica Airport Shuttle Parking
3201 Airport Avenue, Santa Monica, CA 90405
Additional Class Locations
John Adams Middle School
2425 16th Street, Santa Monica, CA 90405
Santa Monica High School
601 Pico Boulevard, Santa Monica, CA 90405
Academy of Entertainment and Technology
Administration
Madison Campus
Emeritus College
SANTA MONICA BLVD.
BROADWAY
COLORADO BLVD.
STEWART ST.
OLYMPIC BLVD.
20TH ST.
15TH ST.
11TH ST.
LINCOLN BLVD.
4TH ST.
2ND ST.
CLOVERFIELD BLVD.
27TH ST.
PICO BLVD.
PEARL ST.
OCEAN PARK BLVD.
23RD ST.
AIRPORT AV.
BUNDY DR. - S. CENTINELA AV.
10
405
1
Santa Monica High School
Santa Monica College Main Campus
John Adams Middle School
Airport Arts Center
Airport Shuttle Parking
Santa Monica Airport Campus

Assets

Keenan & Associates — Property & Casualty Administration Department
Site Statement of Values — Site Address: 1827-1827 ½ Pearl Street Santa Monica, CA 90405

(This table has been condensed to fit the needs of this Plan, the information is the same.)

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
1	Campus Police/Annex 1714 Pearl Street	1975	D-Wood	1	1,075	$84,054	$16,812	100,866
2	Campus Police/Annex Garage 1714 Pearl Street	1975	D-Wood	1	369	$7,620	$1,523	$9,143
3	109-ISC West/Admissions1724 Pearl Street	1975	D-Wood	1	1,008	$81,279	$16,255	$97,534
4	110-ISC West/Utility Shed 1724 Pearl Street	1975	S-Metal	1	120	$1,173	$235	$1,408
5	111-ISC West/Garage 1724 Pearl Street	1975	D-Wood	1	379	$7,901	$1,580	$9,481
6	112-ISC West/Cargo Container-North 1724 Pearl Street	1975	S-Metal	1	144	$1,756	$351	$2,107
7	113-ISC West/Cargo Container-South 1724 Pearl Street	1975	S-Metal	1	144	$1,756	$351	$2,107
8	114-Campus Police 1718 Pearl Street	1975	D-wood	1	1,102	$87,679	$17,536	$105,215
9	115-Campus Police/Car Shelter 1718 Pearl Street	1975	D-Wood	1	589	$3,454	$691	$4,145
10	116-Campus Police 1718 Pearl Street	1975	D-Wood	1	369	$8,004	$1,602	$9,606
11	1-07-ISC-East 1734 Pearl Street	1975	D-Wood	1	1,088	$90,808	$18,162	$108,970
12	108-ISC-East/Counseling	1975	D-Wood	1	553	$48,862	$9,773	$167,605

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
13	Building 33 1738 Pearl Street	1941	D-Wood	1	1,400	$300,000	$175,000	$475,000
14	103-Horticulture Center 1744 Pearl Street	1975	D-Wood	1	996	$82,613	$16,523	$99,136
15	104-Horticulture Center/Patio Shelter 1744 Pearl Street	1975	S-Metal	1	396	$2,751	$550	$3,301
16	105-Horticulture Center/Storage Shed 1744 Pearl Street	1975	D-Wood	1	0	$2,645	$528	$3,173
17	106-Horticulture Center/Garage 1744 Pearl Street	1975	D-Wood	1	180	$7,044	$1,408	$8,452
18	134-Tri-plex Residence 1827-1827 1/2 Pearl Street	1950	D-Wood	1	1,818	$118,581	$23,717	$142,298
19	FEMA Trailer Unit 1 2121 16th Street	1992	D-Wood	1	440	$10,634	$2,127	$12,761
20	FEMA Trailer Unit 2 2121 16th Street	1992	D-Wood	1	440	$43,476	$8,695	$53,171
21	LP1 Inspection Trailer Unit 1, 2121 16th Street	1992	D-Wood	1	330	$19,822	$3,966	$23,788
22	Administration 2714 Pico Blvd.	1975	D-Wood	3	42,867	$3,932,445	$786,445	$4,718,669
23	Campus 2800 Airport Avenue		C-Masonry	0	13,899	$2,026,592	$405,318	$2,431,910
24	Storage 2800 Airport Avenue		D-Wood	0	0	$718	$143	$861
25	Classroom 2800 Airport Avenue		D-Wood	0	960	$70,846	$14,171	$85,017
26	Shade Shelter 2800 Airport Avenue		S-Metal		580	$6,351	$0	$6,351
27	Vending Shelter		D-Wood		0	$3,362	$0	$3,362

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
28	Bus Stop Shelter 2800 Airport Avenue		D-Wood	0	0	$1,885	$0	$1,885
29	Annex/Hangar 2800 Airport Avenue		C-Masonry	0	3,905	$198,745	$39,749	$238,494
30	Annex/Storage Shed 2800 Airport Avenue		D-Wood	0	0	$784	$157	$941
31	Annex/Graphics 2800 Airport Avenue		S-Metal	0	0	$1,515	$304	$1,819
32	Annex/Guard House 2800 Airport Avenue		D-Wood	0	0	$1,610	$322	$1,932
33	West Building 3171 S. Bundy Drive #4	1980	C-Masonry	4	64,000	$10,000,000	$1,000,000	$11,000,000
34	East Building 3171 S. Bundy Drive #4	1960	C-Masonry	2	30,000	$5,000,000	$750,000	$5,750,000
35	Building One 3171 S. Bundy Drive #4	1950	C-Masonry	1	96,000	$3,000,000	$500,000	$3,500,000
36	Emeritus College 1227 2nd Street	2003	A-Steel	4	19,875	$6,606,870	$402,000	$7,008,870
37	Academy of E&T 1660 Stewart Street		B-Reinforced Concrete	0	49,651	$7,784,756	$1,556,951	$9,341,707
38	Shade Shelter 1660 Stewart Street		S-Metal	0	1,230	$11,352	$0	$11,352
39	Vending Shed 1660 Stewart Street		D-Wood	0	0	$3,208	$0	$3.208
40	Guard House 1660 Stewart Street		D-Wood	0	0	$1,494	$0	$1,494
41	Madison Campus UM 1310 11th Street		C-Masonry	0	40,073	$5,061,393	$1,012,279	$6,073,672
42	Madison Campus Guard House 1310 11th Street		D-Wood	0	0	$1,463	$294	$1,757
43	Administrative System P 1900 Pico Blvd.	1951	C-Masonry	1	3,888	$418,269	$83,653	$501,922
44	Administrative System Q	1951	C-Masonry	1	3,957	$397,759	$79,551	$501,922

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
45	Administrative System Y 1900 Pico Blvd.	1951	C-Masonry	1	4,736	$497,059	$99,412	$596,471
46	Administrative System R 1900 Pico Blvd.	1951	C-Masonry	1	1,596	$191,150	$38,231	$229,381
47	Administration Restroom 1900 Pico Blvd.		C-Masonry	1	1,050	$193,945	$38,789	$232,734
48	Afro-American Center 1900 Pico Blvd.	1970	D-Wood	1	1,200	$96,886	$19,377	$116,263
49	Art Complex 1900 Pico Blvd.	1951	C-Masonry	1	11,694	$1,530,573	$306,115	$1,836,688
50	Art Complex Storage Shed 1900 Pico Blvd.		D-Wood	1	224	$2,234	$448	$2,682
51	Amphitheatre/Live State 1900 Pico Blvd.		C-Masonry	1	10,900	$464,151	$92,830	$556,981
52	Building N/Box Office 1900 Pico Blvd.		D-Wood	1	3,650	$367,589	$73,517	$441,106
53	ESL Building 1900 Pico Blvd.	1985	D-Wood	1	6,000	$526,859	$105,372	$6332,231
54	Building Business Center 1900 Pico Blvd.		B-Reinforced Concrete	1	47,476	$5,732,897	$1,146,580	$6,879,477
55	Greenhouse 1900 Pico Blvd.	1977	S-Metal	1	2,496	$87,832	$474,.297	$562,129
56	Gymnasium/Pavilion 1900 Pico Blvd.	1959	C-Masonry	1	38,494	$4,745,609	$949,122	$5,694,731
57	PE Field Grandstand/Pavilion 1900 Pico Blvd.		S-Metal	1	38,494	$255,262	$0	$255,262
58	P.E. Annex – South 1900 Pico Blvd.	1976	D-Wood	1	3,938	$327,013	$65,403	$392,416
59	P.E. Annex –North1900 Pico Blvd.	1976	D-Wood	1	5,907	$463,030	$92,607	$555,647
60	Liberal Arts 1900 Pico Blvd.	1950	B-Reinforced Concrete	1	37,901	$3,941,171	$788,234	$4,729,405

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
61	Letter and Science	1950	B-Reinforced Concrete	1	26,101	$3,348,889	$758,250	$4,107,139
62	Library & Media Center	2003	B-Reinforced Concrete	4	114,188	$27,521,250	$6,552,320	$34,073,570
63	Main Stage/Little Theater	1951	B-Reinforced Concrete	1	14,743	$2,020,592	$404,119	$2,424,711
64	P.E. Locker Room	1958	C-Masonry	1	23,486	$2,449,724	$489,945	$2,939,669
65	Concert Hall	1978	B-Reinforced Concrete	1	7,127	$1,111,003	$222,201	$1,333,204
66	Music Building	1978	C-Masonry	1	7,880	$859,155	$171,830	$1,030,985
67	Music Annex		C-Masonry	1	1,432	$149,952	$29,990	$179,942
68	Science Village-RLC	1994	D-Wood	1	12,600	$785,369	$157,075	$942,444
69	Science Village-RLC	1994	D-Wood	1	960	$78,218	$15,643	$93,861
70	Science Village-RLC	1994	D-Wood	1	960	$78,218	$15,643	$93,861
71	Science Village-RLC	1994	D-Wood	1	960	$75,991	$15,198	$91,189
72	Science Village-RLC	1994	D-Wood	1	960	$78,991	$15,198	$91,189
73	Science Village-RLC	1994	D-Wood	1	7,200	$482,882	$96,577	$579,459
74	Science Village-RLC	1994	D-Wood	1	960	$77,060	$15,412	$92,472
75	Science Village-RLC	1994	D-Wood	1	960	$80,707	$16,141	$96,848
76	Science Village		S-Metal	1	160	$1,951	$390	$2,341
77	Science Village		S-Metal	1	160	$1,951	$390	$2,341
78	Science Village		S-Metal	1	160	$1,951	$390	$2,341
79	Science Village		S-Metal	1	160	$1,951	$390	$2,341
80	Science Village		S-Metal	1	160	$1,951	$390	$2,341
81	Science Village-RLC		D-Wood	1	300	$29,188	$5,837	$35,025
82	Science Village/Haz Mat Shed		S-Metal	1	294	$6,151	$1,229	$7,380
83	Science Village-RLC	1994	D-Wood	1	960	$74,259	$14,852	$89,111
84	Science Village-RLC	1994	D-Wood	1	960	$74,259	$14,852	$89,111
85	Vending Shelter	1994	D-Wood	1	288	$6,666	$0	$6,666
86	Library Village ½ -RLC	1994	D-Wood	1	1,800	$129,652	$25,931	$238,387
87	Library Village ¾-RLC	1994	D-Wood	1	1,440	$106,861	$21,374	$238,487

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
88	Library Village 7.8-RLC	1994	D-Wood	1	2,880	$197,525	$39,505	$237,050
89	Library Village 9,10,121,12-RLC	1994	D-Wood	1	2,880	$198,656	$39,731	$238,387
90	Library Village,12,14,15,15A,/16-RLC	1994	D-Wood	1	2,880	$198,656	$39,731	$238,387
91	Library Village 32-38-RLC	1994	D-Wood	2	7,920	$555,242	$111,048	$666,290
92	Library Village 26-31-RLC	1994	D-Wood	1	7,920	$509,247	$101,849	$611,096
93	Library Village 20-25-RLC	1994	D-Wood	0	7,920	$509,247	$101,849	$611,096
94	Library Village Restroom-RLC		D-Wood	0	480	$48,615	$9,723	$58,338
95	Library Village 101-161-RLC		D-Wood	0	6,912	$478,775	$95,755	$574,530
96	Cargo Container		S-Metal	0	160	$1,702	$340	$2.042
97	Stadium-Maintenance Shops		C-Masonry	0	18,322	$750,148	$150,030	$900,178
98	Storage Shed	1947	D-Wood	0	148	$2,562	$512	$3,074
99	Material Shelter	1947	S-Metal	0	200	$2,411	$481	$2,892
100	Storage Shed		D-Wood	0	288	$4,664	$933	$5,597
101	Stadium Grandstand/Press Box	1947	B-Reinforced Concrete	0	21,708	$1,595,899	$)0	$1,595,899
102	Facilities Services	1985	D-Wood	0	2,848	$186,987	$37,398	$224,385
103	Ticket Booth-North		D-Wood	0	0	$925	$185	$1,110
104	Ticket Booth-South		D-Wood	0	0	$924	$185	$1,109
105	Facilities Administration	1985	D-Wood	0	800	$62,030	$12,406	$74,436
106	Paint Shop	1985	B-Reinforced Concrete	0	1,055	$65,953	$13,191	$79,144
107	Maintenance Material Shelter	1997	S-Metal	0	1,811	$13,068	$0	$13,068
108	Football Field Scoreboard		S-Metal	0	0	$5,309	$0	$5,309
109	Football Field Floodlights		D-Wood	0	0	$19,771	$0	$19,771
110	Football Field Floodlights		S-Metal	0	0	$19,464	$0	$19,464
111	Football Field Floodlights		S-Metal	0	0	$19,464	$0	$19,464

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
112	Football Field Floodlights		A-Steel	0	0	$19,656	$0	$19,656
113	Football Field Floodlights		S-Metal	0	0	$23,559	$0	$23,559
114	Football Field Floodlights		S-Metal	0	0	$19,464	$0	$19,464
115	Football Field Floodlights		S-Metal	0	0	$19,464	$0	$19,464
116	Football Field Floodlights8		S-Metal	0	0	$23,559	$0	$23,559
117	Football Field Practice Cage		S-Metal	0	600	$2,636	$0	$2,636
118	Cargo Container		S-Metal	0	208	$2,213	$443	$2,656
119	Cargo Container		S-Metal	0	224	$2,367	$473	$2,840
120	Cargo Container		S-Metal	0	224	$2,367	$473	$2,840
121	Cargo Container		S-Metal	0	224	$2,367	$473	$2,840
122	Cargo Container		S-Metal	0	224	$2,367	$473	$2,840
123	Student Activities	1950	C-Masonry	0	39,298	$4,833,422	$966,684	$5,800,106
124	Cafeteria/Bookstore	1950	C-Masonry	0	21,245	$1,794,423	$358,885	$2,153,308
125	Storage Trailer		D-Wood	0	240	$18,340	$3,669	$22,009
126	Storage Trailer		D-Wood	0	240	$18,324	$3,664	$21,989
127	Office Trailer		D-Wood	0	240	$20,238	$4,048	$24,286
128	Cargo Container		S-Metal	0	128	$1,561	$313	$1,874
129	Cargo Container		S-Metal	0	160	$1,951	$390	#2,341
130	Cargo Container		S-Metal	0	0	$977	$195	$1,172
131	Cargo Container		S-Metal	0	160	$1,951	$390	$2,341
132	Science Center-West Wing	1999	A-Steel	0	66,515	$11,545,454	$2,309,089	$13,854,543
133	Science Center Elevator Tower	1999	A-Steel	0	0	$84,722	$0	$84,722
134	Science Center Stairwell Tower	1999	A-Steel	0	1,440	$123,001	$0	$123,001
135	Science Center East Wing	1999	A-Steel	0	27,782	$4,598,376	$919,676	$5,518,052
136	Science Center Courtyard/Stairway	1999	B-Reinforced Concrete	0	4,440	$322,511	$0	$322,511
137	Technology NN		B-Reinforced Concrete	0	100,236	$15,323,337	$3,064,667	$18,388,004
138	Auto Maintenance Shop		B-Reinforced Concrete	0	4,043	$678,555	$135,711	$814,266

Bldg No	Building Name/Address	Construction year	Class	Stories	Total Square Ft.	Real Property Replacement Cost	Personal Property Replacement Cost	Total Property Replacement Cost
139	Auto Shop Repair		B-Reinforced Concrete	0	1,250	$219,670	$43,934	$263,604
140	Auto Technician Shop		B-Reinforced Concrete	0	1,760	$235,584	$47,114	282,701
141	Cargo Container		S-Metal	0	144	$1,756	$351	$2,107
142	Paint Booth		S-Metal	0	435	$30,061	$0	$30,061
143	Admissions/Counseling	1950	C-Masonry	0	9,513	$1,077,782	$215,556	$1,293,338
144	Bus Stop Shelter		S-Metal	0	0	$2,276	$0	$2,276
145	Cargo Container/Lot 2		S-Metal	0	160	$2,366	$473	$2,839
146	Cargo Container/Lot 2		S-Metal	0	160	$1,771	$354	$2,125
147	Guard House/parking lot 2		D-Wood	0	0	$893	$178	$1,071
148	Satellite Dish/PE Building		S-Metal	0	256	$14,528	$0	$14,528
149	Clock Tower		B-Reinforced Concrete	0	0	$8,952	$0	$8,952
150	Guard House/lot 1 and 6	1980	D-Wood	0	0	$2,668	$732	$4,400
151	Parking Garage C	1993	B-Reinforced Concrete	0	211,200	$6,909,558	$1,381,912	$8,291,470
152	Parking Garage A	1993	B-Reinforced Concrete	0	184,743	$5,972,098	$1,194,418	$7,166,516
153	Starbucks Coffee Hut		D-Wood	0	0	$5,419	$1,084	$6,503
154	Bus Stop Shelter		S-Metal	0	0	$2,048	$0	$2,048
155	Bus Stop Shelter		S-Metal	0	0	$2,048	$0	$2,048
156	Office	2001	S-Metal	1	20	$15,621	$2,666	$18,287
157	Vacant Property	1975	D-Wood	0	0	$0	$0	$0
Totals					**1,591,584**	**$67,225,239.00**	**$10,721,853.00**	**$56,503,486.00**

Calif. Comm. Colleges | Space Inventory Report | 3/1/2004

Building Summary Report (2004-05)

Santa Monica Community College District | Page 1

781 Santa Monica College

Bldg #	Building Name	Constr. Year	Total Rooms	Total Stations	Total Room ASF	Total OGSF	Percent Efficiency
1	STUDENT SERVICES	1957	47	103	8,289	18,014	46.0%
2	COUNSELING ANNEX	1970	10	12	1,308	1,504	87.0%
3	ART	1952	26	374	14,766	22,037	67.0%
4	AMPHITHEATER	1967	11	15	2,379	3,500	68.0%
5	ENGLISH AS SECOND LA	1975	15	189	4,711	6,450	73.0%
6	BUSINESS	1980	92	1,140	46,318	53,772	86.1%
7	GREENHOUSE	1995	1		1,394	1,470	94.8%
8	GYMNASIUM	1958	9	130	31,647	41,158	76.9%
9	PE BUILDING ANNEX	1976	44	213	7,808	10,506	74.3%
10	LIBERAL ARTS	1952	74	685	20,652	36,353	56.8%
11	LETTERS AND SCIENCE	1952	65	582	14,078	33,021	42.6%
12	LIBRARY & MEDIA CENTER	1980	96	1,485	68,937	94,336	73.1%
14	PHYSICAL EDUCATION	1958	31	42	16,832	24,653	68.3%
15	MUSIC/CONCERT HALL	1952	46	484	11,252	16,139	69.7%
16	SCIENCE VILLAGE	1994	40	1,016	15,226	22,800	66.8%
17	LIBRARY VILLAGE	1995	67	5,799	35,256	44,872	78.6%
18	STADIUM/FACILITIES	1947	35	17	14,042	23,236	60.4%
19	STU. HEALTH & ACTIVITIES	1952	79	800	41,561	59,644	69.7%
20	SCIENCE	1999	118	1,261	55,603	98,400	56.5%
22	DRESCHER HALL	1969	172	1,267	63,654	111,145	57.3%
24	COUNSELING	1952	28	41	5,616	10,615	52.9%
25	a=ENV. CTR. b=I.S.C.	1941	14	12	1,470	2,128	69.1%
26	INTSTIT. RESEARCH	1941	5	5	746	994	75.1%
27	CAMPUS POLICE	1941	10	4	1,493	1,990	75.0%
28	CAMPUS POLICE ANNEX	1941	3	2	408	842	48.5%
29	AIRPORT CAMPUS	1953	26	382	16,079	22,874	70.3%
30	AIRPORT CAMPUS ANEX	1953	6	62	4,121	5,589	73.7%
31	MADISON CAMPUS	1943	43	716	24,071	42,819	56.2%
33	1738 PEARL STREET	1941				944	0.0%
40	ACADEMY OF ENT. & TECH	1985	65	796	32,748	52,831	62.0%
41	EMERITUS COLLEGE	2002	20	495	12,855	19,875	64.7%
50	TEMP. ADMINISTRATION	1985	71	114	13,533	22,597	59.9%
64	BUNDY CAMPUS WEST BLDG.	1980				64,000	0.0%
65	BUNDY CAMPUS EAST BLDG.	1965				30,000	0.0%

SANTA MONICA COMMUNITY COLLEGE DISTRICT

FIVE-YEAR CONSTRUCTION PLAN 2006/7-2010/11

To be submitted July 1, 2004

DISTRICT ORDER OF PRIORITY — **SCHEDULE OF FUNDS**

Priority		Total Project Cost	Funding Source(s)	Fiscal year of occupancy	04-05	05-06	06-07	07-08	08-09	09-10	10-11
1	**Earthquake Repl. Liberal Arts Bldg.,Unit 1 South**	$ 16,756,136	S/D/F/O	06/07	(C) $ 15,209,776	(E) $ 495,000					
2	**Student Services Building**	$ 40,847,960	S/D					(P)(W) $ 2,770,700	(C) $ 36,536,760	(E) $ 1,540,500	
3	**Earthquake Repl. Liberal Arts Bldg.,Unit 2 North**	$ 11,962,606	D/F/O	05/06	(C) $ 10,878,000	(E) $ 275,000					
4	**Renovation, Main Stage**	$ 15,918,626	D	05/06	(C) $ 14,488,830	(E) $ 570,000					
5	**Renovation, Bundy Campus West Building**	$ 18,344,697	D	04/05	(C) $ 16,633,350	$ 500,000					
6	**Renovation for Music, Madison**	$ 4,312,879	D	06/07	(C) $ 3,950,342	(E) $ 155,200					
7	**Theater Addition, Madison**	$ 24,036,400	D*	06/07	(C) $ 21,702,200	(E) $ 750,000					
8	**14th and Pico Site**	$ 14,704,750	D	07/08		(P)(W) $ 1,200,000	(C) $ 12,987,000	(E) $ 517,750			
9	**Shuttle Replacement Parking Structure**	$ 15,256,000	D	06/07		(P)(W) $ 1,008,000	(C) $ 14,208,000	(E) $ 40,000			
10	**Campus Infrastructure/Safety**	$ 2,995,200	D	06/07	(P)(W) $ 220,000	(C) $ 1,110,000	(C) $ 1,100,000	(C) $ 200,000			
11	**Northwest Quad Development**	$ 4,326,100	D	06/07	(P)(W) $ 350,000	(C) $ 3,896,100	(E) $ 80,000				
12	**Pico Campus Entrance**	$ 2,959,750	D	09/10				(P) $ 108,200	(W) $ 126,369	(C) $ 1,654,400	(E) $ 50,000
13	**Math/Science Addition**	$ 21,215,910	S/D	09/10					(P)(W) $ 1,569,750	(C) $ 16,456,000	(E) $ 1,380,000
14	**Letters & Science Demolition/Site Restoration**	$ 1,750,000	D	09/10						(P)(W) $ 150,000	(C) $ 1,600,000

Funding Phase: (A) Land Acquisition (P) Preliminary Plans (W) Working Drawings (C) Construction - incl. "soft" costs (E) Equipment

Funding Source: S=State D=District F=FEMA O=Other

D*=Does not include any Measure U Bond Funds

PROJECTS COMPLETED OR TO BE COMPLETED AND OCCUPIED DURING THE CURRENT FISCAL YEAR 2003-2004:
Library, Emeritus College, Library Village Renovation for Math, Relocation of Kinesiology, Dance, Recreation and Athletics Offices

SANTA MONICA COLLEGE

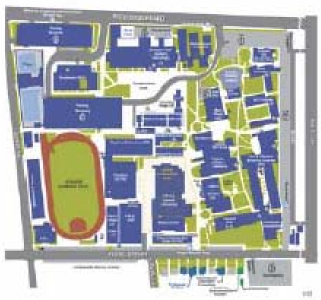
Facility Assessment Report

Summary of Findings from Reports Commissioned in 2001, 2002 and 2003

3D/I
12100 Wilshire Boulevard, Suite 1950
Los Angeles, CA 90025
Tel: 310/447-7895 Fax: 310/447-8201

Facilities Assessment Report
Summary of Findings

Executive Summary



Three assessment reports have been commissioned by the College.

1. An August 2001 Report providing first assessment of condition.
2. An October 2002 Report updating and providing more detailed information as part of statewide community college Fusion program.
3. A September 2003 Report for a number of newly acquired buildings.

Introduction

Santa Monica College retained 3D/I on several occasions to assist it in assessing and documenting the facility repair, rehabilitation, modernization and new construction requirements for its main campus and satellite facilities. This Summary of Findings Report includes the Executive Summary below that briefly describes the reports commissioned by the College. The 3 sections that follow the Executive Summary provide more detailed information from each of the three assessment reports. Included are selected pages from the August 2001 report; the October 2002 report exclusive of the Survey Detail pages; and the entire September 2003 report. Complete documents for all three assessment reports are available electronically at www.smc.edu/facilities resources.

First Assessment Report – August 2001

Santa Monica College initially commissioned 3D/I in mid 2001 to prepare for a planned bond issue early the following year. The first report of findings was delivered in August 2001 and contained two sections – an Existing Facilities Assessment and a New Facilities Assessment. The subsequent bond election in March 2002 resulted in the passage of Measure U, authorizing $160 million in general obligation bonds for numerous capital improvements at the College.

The Existing Facilities Assessment section of the report documented the physical condition for 32 of the College's existing buildings both on and off campus. The 32 buildings totaled 937,297 square feet, had an estimated initial cost to repair of $40.6 million, a cost to replace of $151.4 million and an overall facility condition index (FCI) of 27%, a range representing poor overall condition. Only five buildings had FCI's of 10% or less, the range considered representative of a building in good or fair condition. All other buildings had FCI's in excess of 10%. Eleven buildings had FCI's of 50% or greater, the range in which a building should be considered for replacement. Four buildings had an FCI of 65% or greater, indicating the structures were in need of complete renovation and reconstruction.

The type of facility condition assessment performed in August 2001 was a "Level 1", which utilizes mathematical modeling and life cycles of a facility's component building systems to determine conditions. A Level 1 assessment is a strategic tool for programming and budgeting capital renewal costs and is performed at a macro level based on review of available records, meetings with the College's facility and maintenance staff, and limited visual inspections.

The New Facilities Assessment section proposed a list of 21 capital projects, identified as necessary to fulfill the College's current and planned facility requirements. These 21 projects involved a combination of renovations to existing buildings, construction of brand new replacements buildings for facilities well past their useful lives or no longer adaptable to required uses, and the acquisition of land for off-site parking.

Second Assessment Report – October 2002

This report was prepared as part of the Foundation for California Community Colleges statewide Fusion program and to help document the need for funding the necessary replacement and upgrading of facilities for all of California's community college districts. Santa Monica College decided to participate in the joint agreement negotiated by the Foundation and rehired 3D/I to conduct a more detailed or what is referred to as a "Level 2" assessment for several of its buildings. Eleven buildings, totaling 465,209 square feet were updated from a Level 1 to a Level 2 assessment, which provided a detailed physical survey and listing of several hundred specific deficiencies found in the major building systems for a number of the facilities. The estimated initial cost to repair these eleven facilities totaled \$31.8 million and the cost to replace totaled \$135 million. The overall FCI rating of 24% for the eleven buildings assessed indicated that the facilities were in poor condition despite being generally well maintained. This is to be expected due to the age of the buildings, nine of which were built prior to 1970. Only two buildings had an FCI less than 10%, the range considered good or fair condition. All other buildings were well into the range consider poor condition. Two buildings had an FCI rating in excess of 50%, approaching the range when the building should be considered for replacement, as opposed to investing the substantial costs to repair a 30 to 40 year old building with systems well beyond their useful lives.

Third Assessment Report – September 2003

This report covered buildings acquired by Santa Monica College since the August 2001 and October 2002 assessments reports were performed. The new buildings included those at the former BAE Systems site, the 4-story Emeritus College office building, the buildings at the 10.4 acre site just south of the Santa Monica Airport, and the new Library facilities on the main campus.

A Level 1 assessment of these nine buildings totaling 325,388 square feet resulted in an estimated initial cost to repair totaling \$27.6 million, a cost to replace of \$74.5 million and an overall facility condition index (FCI) of 36%, a range representing poor overall condition. All five of the buildings at the former BAE site had an FCI of 65% or greater, indicating the structures were in need of complete renovation or reconstruction and should be considered for replacement. The Child Development Center had an FCI of 43%, also indicating poor condition. The remaining buildings were in very good to fair condition.

Facility Condition Findings

The chart below summarizes key information from all three of the assessments performed for Santa Monica College. The chart indicates what level of assessment was conducted (Level 1 – macro or Level 2- detailed). It also provides the replacement cost, cost of repairs, and facility condition index (FCI) figures for the most recent assessment conducted at each of the 38 Santa Monica College buildings listed.

Facility	Year Built	Square Feet	Level 1	Level 2	Last Assessment Year	Replacement Cost	Cost of Repairs	FCI
1 Administration	1957	18,014	2001		2001	$3,913,145	$2,577,032	66%
2 Counseling Annex	1970	1,504	2001		2001	$139,000	$54,541	39%
3 Art	1952	22,037	2001	2002	2002	$5,735,895	$1,605,405	28%
4 International Cntr/Ampitheater	1967	3,500	2001		2001	$1,672,656	$863,186	52%
5 English As Second Language	1975	6,450	2001		2001	$596,109	$236,160	40%
6 Business	1980	53,772	2001	2002	2002	$15,827,874	$1,059,074	7%
7 Greenhouse	1995	1,470	2001		2001	$135,857	$0	0%
8 Gymnasium	1958	41,158	2001	2002	2002	$13,365,299	$3,880,719	29%
9 PE Building Annex	1976	10,506	2001		2001	$601,285	$235,934	39%
10 Liberal Arts	1952	36,353	2001		2001	$7,896,889	$6,526,970	83%
11 Letters and Science	1952	33,021	2001		2001	$7,173,086	$4,723,892	66%
12 Library	1980	110,688	2003		2003	$25,244,612	$30,000	0%
13 Main Stage	1952	14,931	2001		2001	$3,243,431	$1,985,214	61%
14 Physical Education	1958	24,653	2001	2002	2002	$8,134,164	$4,110,351	51%
15a Music Complex	1952	10,000	2001	2002	2002	$3,505,629	$1,187,588	34%
15b Concert Hall	1978	6,139	2001	2002	2002	$1,333,563	$359,802	27%
16 Science Village	1994	22,800	2001		2001	$2,107,176	$1,089,110	52%
17 Library Village	1995	44,872	2001		2001	$4,147,070	$2,143,446	52%
18 Stadium/MOW	1947	23,236	2001	2002	2002	$2,577,214	$2,174,928	84%
19 Student Activities Building	1952	57,041	2001	2002	2002	$16,909,588	$4,205,740	25%
20 Science	1999	98,400	2001		2001	$23,064,960	$202,130	1%
21 Technology	1969	111,145	2001	2002	2002	$32,715,709	$8,222,001	25%
22 Admissions	1952	10,615	2001		2001	$2,305,875	$1,518,552	66%
23a Environmental Studies	1941	2,128	2001		2001	$120,357	$50,997	42%
23b International Education	1941	1,228	2001		2001	$164,220	$69,582	42%
24 Institute Research	1941	994	2001		2001	$132,928	$56,323	42%
25 Campus Police	1941	1,990	2001		2001	$266,123	$112,759	42%
26 Campus Police Annex	1941	842	2001		2001	$112,601	$47,710	42%
27 Airport Campus	1953	22,874	2001	2002	2002	$6,732,999	$2,248,987	33%
28 Airport Campus Annex	1953	5,589	2003		2003	$747,417	$67,236	9%
29 Airport Toilet Building	2003	730	2003		2003	$97,623	$0	0%
30 Madison Campus	1943	42,819	2001	2002	2002	$12,603,841	$1,850,723	15%
31 Academy of E & T	1985	52,831	2001	2002	2002	$15,550,889	$910,912	6%
32 Temporary Administration	1985	42,597	2001		2001	$6,784,424	$0	0%
33 BAE-Butler Building	1960	8,833	2003		2003	$816,346	$567,202	69%
34 BAE-Central Building	1953	87,871	2003		2003	$20,040,739	$13,199,140	66%
35 BAE-East Building	1953	29,400	2003		2003	$6,705,258	$4,416,186	66%
36 BAE-West Building	1980	60,600	2003		2003	$13,821,042	$9,102,751	66%
37 Child Development Center	1963	1,802	2003		2003	$410,982	$178,096	43%
38 Emeritus College	2002	29,000	2003		2003	$4,532,891	$0	0%
Totals		**1,154,433**				**$271,986,766**	**$81,870,380**	**30%**

History of SMC Facilities & Means of Financing

Prior to Proposition 13

Most public schools in California were built during the post-World War II boom, 1950 to 1965, including most of the facilities on the main campus of Santa Monica College.

The main campus property was purchased in several stages. The first purchases were in 1940 and 1941—29.2 acres for $1,650 an acre! The Board used savings for this purchase, or in the language of the day, the Board "utilized the funds they had in a beneficial way".

Prior to the passage of Proposition 13 in 1978, the Board of Education could finance facility improvements in several ways:

• The Board could seek voter approval by two-thirds vote to spread the cost over multiple years through a bond election.

• The Board could increase local property taxes by majority vote of the Board of Education to an amount needed to pay the entire cost in a single year.

• The Board could use prior years' savings to pay for the facility improvement.

(School reserves prior to Proposition 13 would typically be as much as a third of the operating budget.)

In 1962, State voters approved the first ever funding of public junior colleges, providing a one-third match. In 1967, responding to a statewide decline in enrollment of freshmen and sophomores, the California Legislature passed the Junior College Construction Act, which increased the match to 50%. Over time, match requirements have varied.

(Santa Monica College's legal status has changed over time as well. In 1929, Santa Monica Junior College was founded as a program of the Santa Monica-Malibu Unified School District. In 1945, the program was renamed Santa Monica City College (SMCC) in recognition of the College's three divisions, technical, general education, and adult. In 1970, SMCC became a separate district with separate tax revenues, but with a common Board of Education and Board of Trustees. At the same time, the Board also changed the name to Santa Monica College to reflect the fact the College was serving a larger population than just the City of Santa Monica and to compete with West Los Angeles College, which had just opened in 1969. An effort to separate the Boards went to local voters in 1972 but failed. In 1982, local voters approved the separation of the two boards.)

During the period of time prior to Proposition 13, which took effect in 1979, the Board of Education used savings, single year tax assessments, and local bond funds to pay for the purchase of the remainder of the main campus and to build the first campus structure, Corsair Stadium. The stadium, completed in 1948, replaced the City of Santa Monica's Municipal Stadium, which had been located in Memorial Park. (The project was finished a year late and 60% over budget.)

Prior to Proposition 13, there were four local bonds approved by 2/3 vote that financed the main campus. (The 1946 and 1950 bond elections proposed separate measures for college, high school, and elementary school improvements. The 1957 and 2 1966 bond elections proposed college improvements along with other school improvements in single measures.)

• 1946 – Bond passes with 77% approval for construction of administration, library (now Letters & Science), speech arts (Main Stage), student activities, and 2-story classroom buildings to meet increases in enrollment by veterans using the G.I. Bill and from the passage of the Employment Act of 1946.

• 1950 – Bond passes with 89% approval for construction of buildings for art, music, and science (and for gymnasium and cafeteria if there were sufficient funds) to meet new enrollment pressures due to State mandated decrease of freshmen and sophomore enrollment at State universities.

• 1957 – Bond passes with 84% approval and includes college improvements to complete 1950s building plans and add new physical education buildings, add a science wing (project did not happen), enlarge library (Letters and Science), enlarge the student center, and add new vocational educational buildings.

• 1966 – Bond passes (vote tally not available) and includes college improvements to add art classrooms, a second floor to the technology building on the North Campus (this became the two-story Technology building on the Main Campus), and to acquire the remainder of the Pico frontage to "square-out" the campus.

Several projects were built with financing that used a combination of District reserves or bond funds and State matching funds:

• 1968 – Board authorizes the use of bond funds and a match of State construction funds to build new two-story Technology building on main campus.

• 1978 – Board authorizes the use of District reserves and a 75% match of State construction funds to build a new Library and a new Business and Vocational Education Building.

Three other projects prior to Proposition 13 were financed from sources other than savings, assessments, or bond funds:

• 1949 – Board approves building of Municipal Pool on main campus by City of Santa Monica.

• 1967 – Amphitheater is funded through SMC Associated Student fees.

• 1979 – Board accepts Federal grant to build Concert Hall auditorium, partially augmented with reserves.

Proposition 13

Proposition 13, an initiative amendment to the California Constitution, passed in June 1978. The initiative restricted the tax rates on secured property to no more than 1% of assessed value plus an adjustment for any outstanding local debt. As a consequence, Proposition 13 eliminated the ability of local agencies, including school districts, to propose general obligation bond measures.

The State responded to the ongoing capital needs of California's school districts by implementing a number of new programs, including asking State voters, by majority vote, to approve State bonds to finance new school facilities. There have been more than 3 dozen State school bond measures since Proposition 13, and all but one passed with the necessary 50% majority. Funds are awarded through a competitive process.

Over time, Santa Monica College has received funding for a number of projects from these State facility bonds:

• 1993 – $3.4 million for third floor addition to Technology Building.

• 1996 – $2.8 million for second floor build-out of Technology Building.

• 1998 – $3 million for equipment for Replacement Science Building.

• 2000 – $17 million for Library Expansion project.

• 2002 – $4.5 million for Earthquake Replacement Liberal Arts Building

Amendment to Proposition 13: Proposition 46 In June 1986, State voters passed Proposition 46, which reestablished the authority of counties, municipalities, and school districts to issue general obligation bonds, subject to two-thirds approval of voters. In 1992, Santa Monica College became the first California community college district to pass a bond measure since before Proposition 13.

• 1992 – Bond passes for $23 million with 66.8% approval for Library extension, Science Annex, and repairs to the Madison campus (Proposition T).

(Other local bonds requiring two-thirds approval have also been passed since June 1986. The City of Santa Monica passed a $4.5 million bond measure in November 1988 to purchase land to expand the library and a second bond measure in November 1998 for $25 million with 81.4% "yes", also for Library expansion. The Santa Monica-Malibu Unified School District has passed two bonds since 1986, one for $75 million with 73.4% "yes" in November 1990 and another for $42 million with 80.2% "yes" in November 1998.)

Amendment to Proposition 13: Proposition 39

In November 2000, State voters again amended Proposition 13 by passing Proposition 39, which gives school districts and community college districts (but not cities or counties) the option of proposing facility bond measures that can be approved with a 55% "yes" vote. Proposition 39 elections require a Board adopted project list and a citizen's oversight committee throughout the life of the bond. It also limits the amount of property tax to $25 per $100,000 of assessed value for community college districts ($60 per $100,000 of assessed value for unified school districts).

In March 2002, Santa Monica College proposed a bond measure under the provisions of Proposition 39:

• 2002 – Bond passes for $160 million with 70% approval for main campus building replacements and renovations (Liberal Arts, Letters & Science, Main Stage, and Student Activities); centralization of Student Services; new Science wing; new Emeritus facility; property acquisition; off-site parking and construction of off-site classrooms; new campus quad; and safety and technology upgrades (Measure U).

Lease Financing

Lease financing is based upon a jurisdiction's authority to acquire and dispose of property rather than on its authority to incur debt. As a result, under State law, a properly constructed lease is not considered a public debt and does not require a vote of the electorate.

Santa Monica College uses a type of lease revenue bond called a "Certificate of Participation" (COP), which is a type of security designed to make public agency leases accessible to the small investor by dividing the lease obligation into small parts.

The College currently has three active COPs:

• Parking Structures A and C (and the new improvements to C), with parking fee revenues used to make the lease payments.

• Academy of Entertainment and Technology, with International Student capital fee revenues used to make the lease payments.

• Bundy property, with tenant lease revenues used to make the lease payments (this property will be financed with Measure U funds at some future time).

The College also used a COP to finance the second floor of the cafeteria and improvements to KCRW, with revenue from Associated Students membership fees and KCRW subscriber donations used to make the lease payments.

Capital Grants

In addition to the Federal grant the College received in 1979 for the Concert Hall, there have been a number of other facility grants over the years:

• 1994 and ongoing – Federal Emergency Management Agency (FEMA) funds to repair and replace earthquake-damaged facilities following the January 1994 Northridge earthquake. FEMA paid for most of the Science Complex and part of the costs for the replacement of the Liberal Arts Building and the replacement of Parking Structure B.

Total capital funds may exceed $55 million.

• 1999 – $1.25 million for equipment for the Academy of Entertainment & Technology from a Chancellor's Office grant.

• 2002 and 2004 – $1.25 million in Federal grants for the Madison Theater project.

• 2003 – $10.2 million in funding for the replacement Liberal Arts Building from City of Santa Monica's Earthquake Recovery Redevelopment Project Area (ERRPA) funds.

• Various years – SMC has also received private gifts in various amounts for capital projects, including gifts to assist construction of the Olympic Track, Planetarium, Madison Theater, Emeritus College, SMC's Environmental Center, and radio station KCRW.

Santa Monica College Facilities and Sources of Funding,

1937 to Near-Term Future Current Name Source Detail Virginia Ave. Park Acquisition (5.5 acres) 1937

• Reserves & Assessment 1 Main Campus Acquisition #1 (29.19 acres) 1940
• Reserves & Assessment 2 Corsair Stadium 1948
• Bond 1 – 1946 Main Campus Acquisition #2 (about 1 acre) 1950
• Bond 2 – 1950 3 Student Activities – First Phase 1952
• Bond 1 – 1946 Letters & Science – First Phase 1952
• Bond 1 - 1946Counseling 1952
• Bond 1 - 1946Liberal Arts 1952
• Bond 1 - 1946Main Stage 1952
• Bond 1 - 1946 9 Music 1952
• Bond 2 – 1950 Art –

North & South Wings 1952
• Bond 2 - 1950
Municipal Swimming Pool 1952
• Joint Operating Agreement 9 Science 1953
• Bond 2 - 1950 9 Main Campus Acquisition #3 (about 5 acres) 1957
• Bond 3 - 1957 4 Student Services 1957
• Bond 3 – 1957 Gymnasium 1958
• Bond 3 – 1957 Physical Education 1958
• Bond 3 – 1957
Letters & Science – 2 Story Addition 1959
• Bond 3 – 1957 Student Activities – Cafeteria Addition 1959
• Bond 3 - 1957
Student Activities – Bookstore Addition 1959
• Bond 3 - 1957
Amphitheater 1967
• Associated Students Main Campus Acquisition #4 (about 1.25 acres) 1967
• Bond 4 - 1966 5 Drescher Hall – Original 1969 •
• Bond 4 - 1966 & State Grant Art – 2 Story Addition 1972
• Bond 4 – 1966 Parking Lot 2
Land Acquisition 1975 • Reserves & Assessment
Physical Education – Annex 1976 • Reserves & Assessment
1718 Pearl 1976 • Reserves & Assessment
1714 Pearl 1977 • Reserves & Assessment
1724 Pearl 1977 • Reserves & Assessment
1734 Pearl 1977 • Reserves & Assessment
Malibu Mudd Ranch Land Acquisition 1977 See Note 6 6
Concert Hall 1979 • Federal Grant & Reserves
Library 1980 • Reserves & State Grant
Parking Structure B 1981 • Reserves & Associated Students 9
Business 1981 • Reserves & State Grant

Source of Funding

Santa Monica College Facilities and Sources of Funding, 1937 to Near-Term Future Current Name Source Detail

Main Stage – Sound Stage Addition 1984
ESL Bungalows 1984
Olympic Track 1984 • Arco & Olympic Committee
Airport Campus 1988 • Lease (to 2008)
Student Activities – Second Floor Addition 1990 • Associated Students; KCRW; Private Gifts
Madison Campus 1990 • Lease (to 2055)
Parking Structure A 1991 • Student Parking Fees
Parking Structure C 1991 • Student Parking Fees
1744 Pearl 1993
Physical Education – Temporary 1994 • FEMA Grant 10
Drescher Hall – Third Floor Addition 1994 • State Capital Funds
Library Village (including Math Complex) 1995 • FEMA Grant
Greenhouse 1995 • FEMA Grant
Drescher Hall – 2nd Floor Renovation 1997 • State Capital Funds; Private Gifts; FEMA Grant
Academy Campus 1998 • Int'l Students Capital Fee
Madison Campus – Renovation 1998 • Prop T; State ADA; State Deferred Maintenance
1825 Pearl 1998 • Int'l Students Capital Fee

1410 Pico 1998 • Int'l Students Capital Fee
Science Complex 1999 • FEMA Grant; Prop T; State Grant
2714 Pico (Administration) 2000 • Lease Revenue Financing
Child Care Center 2001 • CalWorks Grant 7
Bundy Property Acquisition (10.2 acres) 2001 • Lease Revenue
Bundy – East 2001 • Lease Revenue
Santa Monica Swim Complex 2002 • Joint Operating Agreement
Parking Structure C – Expansion 2002 • FEMA Grant; Student Parking Fees
Student Activities – Bookstore Expansion 2003 • Bookstore Retained Earnings
Library – Expansion 2003 • FEMA Grant; Prop T; State Grant
Parking Structure C - Entryway 2003 • FEMA Grant; Student Parking Fees
Emeritus 2003 • Measure U; Private Gifts
1738 Pearl 2003 • Measure U
Athletic Office - Addition 2004 Measure U
Main Stage – Renovation 2005 • Measure U
Bundy – West Renovation 2004 • Measure U
Liberal Arts – Replacement 2006 • Measure U; ERRPA; FEMA Grant; State Capital Funds 8
North Campus Quad 2007 • Measure U

Current or Future Projects

Santa Monica College Facilities and Sources of Funding, 1937 to Near-Term Future Current Name Source Detail

Student Services – New – • Measure U; State Capital Funds (proposed)
Science Wing – New – • Measure U; State Capital Funds (proposed)
Literacy Center – New – • Measure U
Bundy – Intermodal Transit Center – • Measure U; Federal Grant
Madison Campus – Music Renovation – • Measure U
Madison Campus – Theater – • Federal Grant; Private Gifts
Letters & Science - Renovate or Replace – • Measure U
Student Activities - Renovation – • Measure U

Future Building or Development

SMMUSD and SMC is completely built out at this time excluding the future projects stated previously. If and when they construct new buildings, a hazard vulnerability will be included in the Plan's update.

Critical Assets and Facilities

SMMUSD Owned Critical Assets

Juan Cabrillo Elementary School
30237 Morningview Drive
Malibu, CA 90265

Edison Elementary School
2425 Kansas Avenue
Santa Monica, CA 90404

Franklin Elementary School
2400 Montana Avenue
Santa Monica, CA 90403

Grant Elementary School
2400 Pearl Street
Santa Monica, CA 90404

McKinley Elementary School
2401 Santa Monica Boulevard
Santa Monica, CA 90404

Muir Elementary School
721 Ocean Park Boulevard
Santa Monica, CA 90405

Will Rogers Elementary School
2401 14th Street
Santa Monica, CA 90405

Roosevelt Elementary School
801 Montana Avenue
Santa Monica, CA 90403

Webster Elementary School
3602 Winter Canyon
Malibu, CA 90265

Santa Monica Alternative School House
2802 4th Street
Santa Monica, CA 90405

John Adams Middle School
2425 16th Street
Santa Monica, CA 90405

Lincoln High School
1501 California Street
Santa Monica, CA 90403

Malibu High School
30215 Morningview Drive
Malibu, CA 90265

Santa Monica High School
601 Pico Boulevard
Santa Monica, CA 90405

Olympic High School
721 Ocean Park Blvd
Santa Monica, CA 90405

District Offices
1651 16th Street
Santa Monica, CA 90404

SMMUSD has provided a CD which shows all their buildings, plus a Excel Spreadsheet with building identification.

SMC Owned Critical Assets

The Planning Committee designated all assets owned by Santa Monica College as *critical*.

Non-owned Critical Facilities Shared by SMMUSD/SMC

Los Angeles County Fire Department - Contact Information

Fire Station #70 - 3970 Carbon Canyon Rd. / 456-2513

Fire Station # 71 - 28722 PCH / 457-2578

Fire Station # 88 - 23720 Malibu Road / 456-2812

Fire Station # 99 - 32550 PCH / 457-3706

Los Angeles County Sheriff's Department

Law enforcement services in Malibu are provided by the Los Angeles County Sheriff's Department. The Malibu Lost Hills Station area includes the area within Malibu City limits as well as unincorporated L.A. County areas around Malibu.

Malibu Lost Hills Sheriff's Station
- 27050 Agoura Road, Calabasas
- (818) 878-1808
- (310) 456-6652

City Hall Deputy
- Deputy David Lewey - (310) 456-6652
- Services: Reports, information, "fix-it" ticket sign-off
- Hours: 9 a.m. - 4 p.m. Availability is subject to change; please call first

City of Santa Monica Emergency Services/Departments

Police Department
1685 Main Street
(310) 458-8491 (24 hours)

Substations

Santa Monica Pier, near entrance to the Pier parking lot

3rd Street Promenade, located on 3rd St. south of Santa Monica Blvd

City of Santa Monica Fire Station Locations

Station 1: 1444 7th Street, between Santa Monica Boulevard and Broadway

- One Paramedic Engine Company (Engine 1) with a crew of four
- One Paramedic Rescue Squad (Squad 1) with a crew of two
- One 100' ladder Truck (Truck 1) with a crew of five
- One Air/Light/Rescue unit (Rescue 1) – part of Truck 1
- One command vehicle with a Battalion Chief (Battalion 1)

Station 2: 222 Hollister Avenue, at 2nd Street

- One Engine Company (Engine 2) with a crew of four
- One Paramedic Rescue Squad (Squad 2) with a crew of two
- One Urban Search & Rescue Vehicle (USAR 2)
- One Reserve Engine

Station 3: 1302 19th Street, at Arizona Avenue

- Two Paramedic Engine Companies (Engine 3 & Engine 4, each with a
- One Hazardous Materials Response Vehicle (Haz Mat 4, with Utility,
- One Reserve Engine

Station 5: 2450 Ashland Avenue, south of Ocean Park Boulevard at the Airport

- One Paramedic Engine Company (Engine 5), with a crew of four
- One Aircraft Rescue Fire Fighting Vehicle (Rescue 5)
- One Reserve Engine
- One Reserve Ladder Truck (Truck 2)

Support Services

Public Safety Facility
333 Olympic Drive

Medical Facilities

Santa Monica Hospital
1250 16th Street
Santa Monica, CA 90404

Saint Johns Hospital
1328 22nd Street
Santa Monica, CA 90404

Utility & Agencies

Cable: Charter Communications / 800-964-4844
6609 Santa Monica Blvd
Los Angeles, CA 90038-1311

Electric: Southern California Edison / 800-655-4555 (for residential power outages call 800-962-6269)
Administrative Building
7300 Fenwick Lane
Westminister, CA 92683

Gas: Southern California Gas Company / 800-427-2200
555 W. Fifth Street,
Los Angeles, CA 90013-1011

Streetlights: Public Works / 310-456-2489 x 352 (to request repair of a malfunctioning streetlight.)

Telephone: Verizon / 800-483-4000
2943 Exposition Blvd
Santa Monica, CA 90404

Trash: G.I. Rubbish / 805-522-9400
G. I. Industries Company
195 W. Los Angeles Ave
Simi Valley, California 93065

Water:
Los Angeles County Public Works
Water District 29 / 310-456-6621 (24 Hour: 626-458-4357)
23533 W Civic Center
Malibu, CA90265

Air
Air Quality Management District
21865 Copley Drive - Diamond Bar,
California 91765

California Coastal Commission
45 Fremont Street
Suite 2000
San Francisco, CA 94105-2219

Los Angeles County Department of Beaches and Harbors
13483 Figi Way Tr # 1
Marina Del Rey, CA 90292

Los Angeles County Animal Care & Control
5898 Cherry Avenue
Long Beach, CA 90805

Los Angeles County Vector Control
6750 Centinela Ave
Culver City 90230

Los Angeles Regional Water Quality Control Board
320 West 4th Street
Los Angeles, CA 90013-2343

General Facilities

Federal

Santa Monica Mountains National Recreation Area is located east of Malibu.

State

Several State Parks surround the City of Santa Monica and Malibu.

- Leo Carrillo State Park
- Malibu Creek State Park

- Solstice Canyon Park
- Point Mugu State Park
- Topanga State Park
- Malibu Lagoon State Park
- Malibu Bluffs State Recreation Area

County

Los Angeles County

500 West Temple Street

Los Angeles, CA 90012

City

City of Santa Monica
1444 7th Ave
Santa Monica, CA 90401

City of Malibu
23815 Stuart Ranch Road
Malibu, CA 90265-4861

Higher Education

Colleges/Universities in Santa Monica:

- SANTA MONICA COLLEGE (Full-time enrollment: 15,470; Location: 1900 PICO BLVD; Public; Website: www.smc.edu)
- ART INSTITUTE OF LOS ANGELES (FT enrollment: 1,116; Location: 2900 31ST ST; Private, for-profit; Website: www.aii.aila.edu)
- EMPERORS COLLEGE OF TRADITIONAL ORIENTAL MEDICINE (FT enrollment: 251; Location: 1807B WILSHIRE BLVD; Private, for-profit; Website: www.emperors.edu; Offers Master's degree)
- RAND GRADUATE SCHOOL OF POLICY STUDIES (FT enrollment: 63; Location: 1700 MAIN ST; Private, not-for-profit; Website: www.rgs.edu; Offers Doctor's degree)
- OAK HILL ACADEMY (Location: 3017 SANTA MONICA BLVD STE 301; Private, for-profit; Website: oak-hill.com)
- UNIVERSITY OF SANTA MONICA (Location: 2107 WILSHIRE BLVD; Private, not-for-profit; Offers Master's degree)
- BERLITZ LANGUAGE CENTERS (Location: 616 SANTA MONICA BLVD; Private, for-profit)
- SANTA MONICA MONTESSORI INSTITUTE (Location: 1909 COLORADO AVE; Private, not-for-profit)
- VIDAL SASOON ACADEMY (Location: 321 SANTA MONICA BLVD; Private, for-profit; Website: www.vidalsassoon.co.uk)
- ALEXANDER TRAINING INSTITUTE OF LOS ANGELES (Location: 1526 14TH ST STE 110; Private, for-profit)
- SHIATSU MASSAGE SCHOOL OF CALIFORNIA (Location: 2309 MAIN ST; Private, for-profit)

Other colleges/universities with over 2000 students near Santa Monica:

- UNIVERSITY OF CALIFORNIA-LOS ANGELES (about 5 miles; LOS ANGELES, CA; Full-time enrollment: 35,930)
- WEST LOS ANGELES COLLEGE (about 6 miles; CULVER CITY, CA; FT enrollment: 4,640)
- LOYOLA MARYMOUNT UNIVERSITY (about 8 miles; LOS ANGELES, CA; FT enrollment: 6,890)
- LOS ANGELES VALLEY COLLEGE (about 12 miles; Valley Glen, CA; FT enrollment: 8,900)
- LOS ANGELES SOUTHWEST COLLEGE (about 13 miles; LOS ANGELES, CA; FT enrollment: 2,971)
- LOS ANGELES CITY COLLEGE (about 14 miles; LOS ANGELES, CA; FT enrollment: 8,298)
- WEST VALLEY OCCUPATIONAL CENTER (about 15 miles; WOODLAND HILLS, CA; FT enrollment: 5,240)

Private high schools in Santa Monica:

- CROSSROADS SCHOOL (Students: 1,121; Location: 1714 21ST STREET; Grades: KG - 12)
- ST MONICA HIGH SCHOOL (Students: 597; Location: 1030 LINCOLN BOULEVARD; Grades: 9 - 12)
- CONCORD HIGH SCHOOL (Students: 89; Location: 1831 WILSHIRE BLVD STE B; Grades: 9 - 12)
- WILSHIRE WEST SCHOOL (Students: 48; Location: 1516 19TH STREET; Grades: 7 - 12)

Largest private primary/middle schools in Santa Monica:

- ST MONICA ELEMENTARY SCHOOL (Students: 293; Location: 1039 SEVENTH STREET; Grades: KG - 8)
- CARLTHORP SCHOOL (Students: 281; Location: 438 SAN VICENTE BLVD; Grades: KG - 6)
- ST ANNES SCHOOL (Students: 179; Location: 2015 COLORADA AVENUE; Grades: KG - 8)
- PILGRIM LUTHERAN SCHOOL (Students: 169; Location: 1730 WILSHIRE BLVD; Grades: PK - 7)
- PLURALISTIC SCHOOL INC (Students: 160; Location: 1454 EUCLID STREET; Grades: KG - 6)
- SANTA MONICA MONTESSORI (Students: 155; Location: 1909 COLORADO AVE; Grades: PK - 8)
- GARDEN OF ANGELS (Students: 126; Location: 1009 18TH ST.; Grades: PK - 6)
- THE WESTSIDE WALDORF SCHOOL (Students: 124; Location: 1229 4TH ST; Grades: PK - 4)
- SANTA MONICA FIRST METH KDGN (Students: 110; Location: 1008 11TH ST; Grades: PK - KG)
- NEW ROADS (Students: 97; Location: 1238 LINCOLN BLVD.; Grades: 6 - 8)

College/University in Malibu:

- PEPPERDINE UNIVERSITY (Full-time enrollment: 5,492; Location: 24255 PACIFIC COAST HWY; Private, not-for-profit; Website: www.pepperdine.edu; Offers Doctor's degree)

Other colleges/universities with over 2000 students near Malibu:

- CALIFORNIA LUTHERAN UNIVERSITY (about 14 miles; THOUSAND OAKS, CA; Full-time enrollment: 2,322)
- WEST VALLEY OCCUPATIONAL CENTER (about 15 miles; WOODLAND HILLS, CA; FT enrollment: 5,240)
- SIMI VALLEY ADULT SCHOOL (about 17 miles; SIMI VALLEY, CA; FT enrollment: 4,272)
- MOORPARK COLLEGE (about 20 miles; Moorpark, CA; FT enrollment: 7,773)
- SANTA MONICA COLLEGE (about 22 miles; SANTA MONICA, CA; FT enrollment: 15,470)
- UNIVERSITY OF CALIFORNIA-LOS ANGELES (about 24 miles; LOS ANGELES, CA; FT enrollment: 35,930)
- LOS ANGELES VALLEY COLLEGE (about 26 miles; Valley Glen, CA; FT enrollment: 8,900)

Private high school in Malibu:

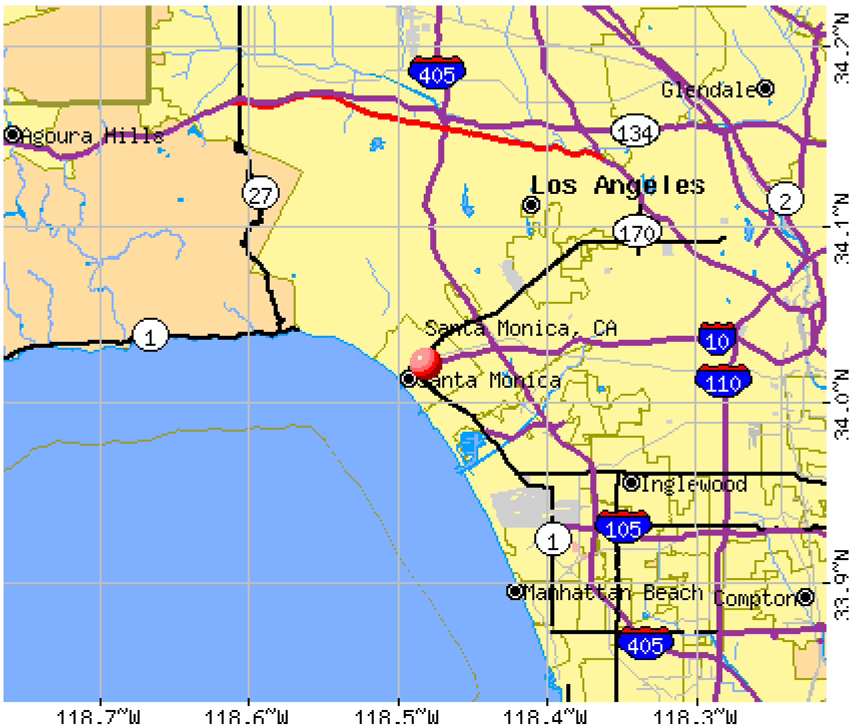
- COLIN MC EWEN SCHOOLS (Students: 32; Location: 23410 CIVIC CENTER WAY; Grades: 7 - 12)

Private primary/middle school in Malibu:

- OUR LADY OF MALIBU SCHOOL (Students: 207; Location: 3625 S WINTER CANYON ROAD; Grades: KG - 8)

Transportation

Major Highways



Airports

- Los Angeles Airport: LAX
- Van Nuys Airport
- Ontario Airport
- John Wayne Airport
- Hawthorne Airport
- Long Beach Airport
- Santa Monica Airport

Mass Transit

Service District	
Area	51.4 sq. mi
Population	458,506
2000 Annual System Performance	
Fixed-Route Bus Passengers	22,057,734
Fixed-Route Operating Service Miles	4,529,935
Fixed-Route Operating Service Hours	380,490
Fixed-Route Farebox Revenue	$7,842,083

Motorbus Fleet Roster

Vehicle	# In Fleet	Accessibility
86 GMC model T8H5307A	21	Yes
88 MCI model TC40102A	10	Yes
89 MCI model TC40102A	10	Yes
90 MCI model TC40102A	10	Yes
92 MCI model TC40102A	10	Yes
95 NOVABUS model TC40102A	21	Yes
NABI 2002 40LFW	37	Yes
96 APS model P10-01A 26ft Electric Shuttle	5	Yes
97 New Flyer model D40LF	67	Yes
Thomas Bus	10	Yes
MCI Charter Bus	4	Yes
Bus Total	205	

Ports & Harbors

Los Angeles Beach and Harbors is responsible for the coast way.
Beaches lay to the west of Santa Monica and Malibu.

Climate

Local Meteorology

Average weather in Malibu, California

Based on data reported by over 4,000 weather stations

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average temp. (°F)	55.7	56.7	57.5	60.5	63.0	67.2	71.1	72.1	70.5	66.1	60.0	56.1
High temperature (°F)	66.2	67.1	67.6	71.1	72.9	77.8	82.4	83.6	81.7	77.5	71.4	67.1
Low temperature (°F)	45.2	46.3	47.4	49.7	53.1	56.6	59.8	60.7	59.3	54.7	48.6	45.0
Precipitation (in)	4.6	4.7	3.9	0.9	0.3	0.1	0.0	0.1	0.2	0.6	1.5	2.7

Hydrology & Land Use

Oceans & Bays

The Cities of Santa Monica and Malibu are bounded on the west by the Pacific Ocean.

Threatened & Endangered Species

The California Endangered Species Act (CESA) (Fish and Game Code Sections 2050-2116) sets forth procedures by which individuals, organizations, or the Department can submit petitions to the Fish and Game Commission requesting that a species, subspecies, or variety of plant or animal be added to, deleted from, or changed in status on the State lists of rare, threatened or endangered species. The factors that contribute to determining the need to list a species include the present or threatened modification or destruction of habitat, competition, predation, disease, overexploitation by collectors, or other natural occurrences or human-related activities. Lists of rare, threatened, and endangered plants and animals can be found on the Department's web site.

Procedures governing the submission and review of petitions for listing, uplisting, downlisting, and delisting of endangered and threatened species of plants and animals are described in Section 670.1, Title 14, California Code of Regulations. The petition format is available from the Fish and Game Commission.

The Habitat Conservation Planning Branch (HCPB) staff coordinates the Department's evaluation of petitions submitted to the Fish and Game Commission for mammals, birds, reptiles, amphibians, freshwater non-game fishes, invertebrates, and plants. The evaluation process includes scheduling the review process and coordinating with the Commission on deadlines, requesting review and input from Regions, evaluating the petition and all other relevant information, conducting a site visit, consulting with the petitioner, USFWS, and other agencies, organizations, and persons with relevant knowledge and expertise, and coordinating the preparation of a written evaluation report. The written report to the Commission contains the Department's recommendation on whether or not the petition contains sufficient scientific information to indicate that the petitioned action may be warranted. Within 90 days of receipt of a petition, HCPB forwards the report to the Director for signature. HCPB coordinates preparation of and provides Department testimony at the Fish and Game Commission meeting where candidacy is considered.

If the petition is accepted and the species becomes a candidate species, HCPB commences coordinating review of the status of the species. Within 10 months the HCPB submits for the Director's review and approval a written report to the Commission. The recommendation from the Director to the Commission is transmitted within the 12-month review period and the recommendation is based on the best scientific information available to the Department, which indicates whether or not the petitioned action is warranted.

During the 12-month review period, HCPB staff notifies all parties affected by or interested in the proposal for listing (Fish and Game Code Section 2074.4). This is done through correspondence, press releases, and public notices for publication in local newspapers.

HCPB staff solicits comments and data on the candidate species, and seeks independent and competent peer review of the Department status report. The HCPB coordinates preparation of and provides Department testimony at the Fish and Game Commission meeting where final consideration of the petition is scheduled.

The Region may take the lead in evaluating the petition and preparing the Department 12-month status report on a candidate species when a species petitioned for listing occurs wholly or mostly within one Department Region. The Deputy Director, Habitat Conservation Division, will determine if a region will take the lead in these situations. For species occurring in several regions, region staff will provide input to HCPB in formulating the evaluation and report. Regional responsibilities include preparing and providing testimony at the scheduled Fish and Game Commission hearings on the petitioned action for both candidacy and final listing decisions.

STATE AND FEDERALLY LISTED ENDANGERED AND THREATENED ANIMALS OF CALIFORNIA - August 2004

This is a list of the animals found within California or off the coast of the State that have been classified as Endangered or Threatened by the California Fish and Game Commission (state list) or by the U. S. Secretary of the Interior or the U. S. Secretary of Commerce (federal list).

The official California listing of Endangered and Threatened animals is contained in the California Code of Regulations, Title 14, Section 670.5. The official federal listing of Endangered and Threatened animals is published in the Federal Register, 50 CFR 17.11.

The California Endangered Species Act of 1970 created the categories of “Endangered” and “Rare”. The California Endangered Species Act of 1984 created the categories of “Endangered” and “Threatened”. On January 1, 1985, all animal species designated as “Rare” were reclassified as “Threatened”.

Animals that are candidates for state listing and animals proposed for federal listing are also included on this list. A state candidate species is one that the Fish and Game commission had formally noticed as being under review by the Department for addition to the State list. A federal proposed species is one for which a proposed regulation has been published in the Federal Register.

Endangered Animals in Los Angeles County

The only known populations of **Unarmored Threespine Stickleback**, a fish, are in the Santa Clara River’s drainage to the Los Angeles River and in San Diego County.

The **Palos Verdes Blue Butterfly**, originally found only in Palos Verdes Peninsula, was thought extinct until it was rediscovered in San Pedro in 1994.

The **El Segundo Blue Butterfly** is found only on two acres on a Chevron Oil Refinery and at the western end of LAX.

The **Gray Whale** migrates along the west coasts of Mexico, the U.S., and Canada. It is federally protected.

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, death, or damage to the environment. Hazards are divided into two categories: natural or technological. Natural hazards include earthquakes, wild fires, and floods; while technological hazards include transportation accidents, illegal disposal, and equipment failures during manufacturing, storage, transportation, and use of hazardous materials.

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

Definitions for Hazard Prioritization

Magnitude

Physical and Economic Greatness of the event

Factors to consider

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

Duration

The length of time the disaster and the effects of the disaster last

Factors to consider

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

Distribution

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

Factors to consider:

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

Area Affected

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

Factors to Consider:

- Geographic Area affected by primary event
- Geographic, physical, economic areas affected by primary risk and the potential secondary effects.

Frequency

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

Factors to consider:

- Historic events and recurrences of events in a measured time frame
- Scientifically based predictions of an occurrence of an event in a given period of time.

Degree of Vulnerability

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

Factors to Consider:

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

Community Priorities

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

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

Hazard Ratings

Hazard Rating Definitions

Instructions for Hazard Mitigation Rating Form

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

0 = No hazard risk in accordance with the definitions for hazard prioritization on page 4 through 6 of this form.

1 = Low Risk in accordance with the hazard prioritization definitions on pages 4 through 6 of this form.

2 = Moderate Risk in accordance with the hazard definitions on pages 4 through 6 of this form.

3 = High Risk in accordance with the hazard risk definitions on pages 4 though 6 of this form.

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

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

Prioritization of Hazard Matrix Results

Hazards are listed in this section first by Natural Hazards and then by Human-caused Hazards, Each hazard and its vulnerability information is in order by priority. For example, in the Natural Hazards section, Earthquake will be listed first, then Wildland Urban Interface Fire, then Winds. In the Moderate Risk Section for Natural Hazards, Severe Weather will be listed first, then Floods and so on.

Stakeholder Prioritization for SMMUSD & SMC

High Priority Hazards

- Earthquake (Natural)
- Wildland Urban Interface Fire (Natural)
- WMD Terrorism (Human-caused)
- Utility Loss (Human-caused)
- Data Telecommunications (Human-caused)
- Winds (Natural)
- Aviation Disaster (Human-caused)

Moderate Priority Hazards

- Transportation Incidents (Human-caused)
- Economic Disruption (Human-caused)
- Biological Health/Disease (Human-caused)
- Severe Weather (Natural)
- Water, Wastewater Disruption (Human-caused)
- Floods (Natural)
- Transportation Loss (Human-caused)
- Civil Unrest/Disorder (Human-caused)
- Drought (Natural)

Low Priority Hazards

- Tsunami (Natural)
- Explosions (Human-caused)
- Sinkholes/subsidence (Human-caused)
- Special Events (Human-caused)
- Volcanic (Natural)

Los Angeles County Disasters Since 1950-2003

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

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
Flood	1969 Storms	Unknown	1969	Los Angeles, San Luis Obispo, Fresno, Riverside, San Bernardino, Santa Barbara, Tulare, Ventura, Amador, El Dorado, Kern, Kings, Madera, Modoc, Mono, Monterey, Orange, Placer, Sacramento, San Joaquin, Shasta, Solano, Stanislaus, Tuolumne, Mariposa, Merced, Calaveras, San Benito, Sierra, Contra Costa, Humboldt, Mendocino, Sonoma, Plumas, Tehama, Yuba, Butte, Marin, Yolo	1/23/69, 1/25,69, 1/28/69, 1/29/69, 2/8/69, 2/10/69, 2/16/69, 3/12/69	1/26/69	47	161	$300,000,000
Fire	Statewide Fires		1970	City of Oakland, Los Angeles, Ventura, San Diego, Kern, San Bernardino, Monterey, Riverside	9/24/70, 9/28/70, 10/1/70, 10/2/70, 10/20/70, 11/14/70	9/29/70	19		$223,611,000
Earthquake	San Fernando Earthquake	DR-299	1971	Los Angeles	2/9/71	2/9/71	58	2,000	$483,957,000
Agricultural	Exotic Newcastle Disease Epidemic	N/A	1972	Los Angeles, Orange, Riverside, San Bernardino, San Diego, Ventura, Santa Barbara	4/10/72, 5/22/72	Not declared			$10,000,000
Fire	Fires	N/A	1973	Los Angeles	7/16/73	Not declared			$1,300,000
Economic	Gasoline Purchasing Problems	N/A	1974	Alameda, Contra Costa, Los Angeles, Orange, Riverside, San Mateo, Solano, Santa Clara, Ventura	2/28/74, 3/4/74, 3/10/74	Not declared			
Fire	Fires	N/A	1975	Los Angeles	11/24/75	Not declared			$19,486,960
Drought	Drought	N/A	1976	Alpine, Calaveras, Colusa, Fresno, Glenn, Madera, Merced, San Diego, San Joaquin, Solano, Stanislaus, Sutter, Tuolumne, Alameda, Butte, Contra Costa, Kings, Los Angeles, Riverside, San Luis Obispo, Tulare, Yolo, Amador, Monterey, Napa, Nevada, San Benito, San Bernardino, Tehama, San Mateo, Marin	2/9/76, 2/13,76, 2/24/76, 3/26/76, 7/6/76	Not declared			$2,664,000,000
Fire	1978 Los Angeles Fire	EM-3067	1978	Los Angeles	10/24/78	10/29/78	1		$61,279,374
Severe Storm	Storms	Unknown	1978	Inyo, Mono, San Diego, San Luis Obispo, Kings,	3/9/78, 2/27/78, 2/13/78	2/15/78	14	21	$117,802,785

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

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
				Barbara, Santa Clara, Santa Cruz, Shasta, Sonoma, Ventura, Trinity, Colusa, Lake Mendocino, Monterey, San Luis Obispo, Solano, Yolo, Butte, Glenn, Kern, Kings, San Bernardino, Sutter, Tehama, Merced, Del Norte, Fresno, Madera, Napa, Placer, Riverside, Stanislaus, Tulare, Humboldt, Mariposa, Nevada, Yuba					
Economic	Mexican Fruit Fly	N/A	1983	Los Angeles	11/4/83	Not declared			
Earthquake	Whittier Earthquake	DR-799	1987	Monterey park, City of Whittier, Los Angeles, Orange	10/2/87 - 10/5/87	10/7/87	9	200	$358,052,144
Earthquake	Imperial County Earthquake	N/A	1987	Imperial	11/23/87	Not declared	0	94	$2,638,833
Economic	Mediterranean Fruit Fly	N/A	1987	Los Angeles	8/25/87	Not declared			
Severe Storm	Coastal Storms	DR-812	1988	Los Angeles, Orange, San Diego	1/21/88	2/5/88	0		
Economic	Mediterranean Fruit Fly	N/A	1988	Los Angeles	7/21/88	Not declared			
Fire, Windstorm	Fires/ High Winds	N/A	1988	Los Angeles	12/9/88	Not declared	0	2	$12,400,000
Economic	Mediterranean Fruit Fly	N/A	1989	Los Angeles	8/9/89	Not declared			
Fire	Santa Barbara Fires	DR-872	1990	Los Angeles, Santa Barbara, Riverside, San Bernardino	6/28/90, 6/29/90	6/30/90	3	89	$300,000,000
Freeze	Freeze	DR-894	1990	Santa Cruz, Fresno, Glenn, imperial, Kern, Mendocino, Monterey, Riverside, San Benito, San Bernardino, San Diego, San Mateo, Santa Barbara, Santa Clara, Solano, Sonoma, Tulare, Ventura, Alameda, Butte, Colusa, Los Angeles, Madera, Marin, Merced, Napa, San Joaquin, San Luis Obispo, Sutter, Yolo, Yuba, Stanislaus, Tehama	12/19/90-1/18/91	2/11/91			$856,329,675
Earthquake	Upland Earthquake	N/A	1990	Los Angeles, San Bernardino	3/9/90, 3/13/90	Not declared	0	38	$12,034,150
Economic	Mexican Fruit Fly	N/A	1990	Los Angeles, San Diego	5/14/90	Not declared			
Severe Storm	1992 Winter Storms	DR-935	1992	Los Angeles, Ventura, City of Los Angeles, kern, orange, San Bernardino	2/12/92, 2/19/92	2/25/92	5		$123,240,531

Hazard Type	Disaster Name	Disaster #	Year	Counties and Cities Declared	State Declaration	Federal Declaration	# of Deaths	# of Injuries	Cost of Damage
Civil Unrest	Los Angeles Civil Disorder	DR-942	1992	Los Angeles	4/29/92	5/22/92	53	2,383	$800,000,000
Flood	1992 Late Winter Storms	DR-979	1992	Alpine, Los Angeles, Humboldt, Napa, Santa Barbara, Culver City, City of Los Angeles, Contra Costa, Mendocino, Sonoma, Fresno, imperial, Madera, Monterey, San Bernardino, Sierra, Tehama, Trinity, Tulare, Modoc, Orange, Riverside, Lassen, Siskiyou, Plumas, San Diego	1/7/93 - 2/19/93	1/15/93	20	10	$600,000,000
Fire	Southern California Firestorms	DR-1005	1993	Los Angeles, Ventura, San Diego, Orange, Riverside, San Bernardino	10/27/93, 10/28/93	10/28/93	4	162	$1,000,000,000
Earthquake	Northridge Earthquake	DR-1008	1994	Los Angeles, Ventura, Orange	1/17/94, 1/24/94	1/17/94	57	11,846	$40,000,000,000
Severe Storm	Severe Winter Storms	DR-1044	1995	Los Angeles, Orange, Humboldt, Lake , Sonoma, Butte, Colusa, Contra Costa, Del Norte, Glenn, Kern, Lassen, Mendocino, Modoc, Monterey, Napa, placer, Plumas, San Luis Obispo, Santa Barbara, Santa Clara, Santa Cruz, Tehama, Ventura, Yolo, Yuba, Alpine, Amador, Nevada, Riverside, Sacramento, San Bernardino, San Mateo, Shasta, Sutter, Trinity, San Diego, Alameda, Marin, Fresno, Kings, El Dorado, Madera, Solano, Siskiyou	1/6/95 - 3/14/95	1/13/95	11		$741,400,000
Severe Storm, Flood	Late Winter Storms	DR-1046	1995	All counties except Del Norte		1/10/95	17		$1,100,000,000
Fire	Southern California Firestorms	EM-3120	1996	Los Angeles, Orange, San Diego	10/1/96			5	$40,000,000
Flood	El Nino		1998	Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, Fresno, Glenn Humboldt, Kern, Kings, Lake, Los Angeles, Marin, Mendocino, Merced, Monterey, Napa, Orange, Riverside,			17		$550,000,000

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

State of California Governor's Office of Emergency Services

HIGH RISK Natural Hazards

Earthquake

Earthquake was rated a HIGH PRIORITY HAZARD in SMMUSD & SMC.

Impact

SMMUSD

The impact can vary from minimal to catastrophic, depending on numerous factors, such as the time of the disaster, magnitude and location. If the earthquake occurs during school hours the potential for loss of life is much greater due to the fact the students are in class. The secondary effects are economic, utility, transportation, data/telecommunication loss, landslides, flooding, and fire.

SMC

The impact is mainly the same as SMMUSD, except the age of the students prohibits SMC from the ability to control the campus. The students have the right to evacuate during the event or shortly after causing a potential mob mentality and danger to themselves and SMC's staff.

The City of Santa Monica and Malibu have completed their Hazard Mitigation Plans. The school districts will evaluate the cities' mitigation strategies and how to implement or network to ensure the maximum implementation for mitigation.

Earthquake History

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.

Fifty-seven 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 earthquakes are 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 the 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

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

Introduction

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.

Geophysical Discussion

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

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

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

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

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

Damage Assessment

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

Unreinforced Masonry Structures

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

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

Residential Structures

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

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

Modern Concrete Frame Structures

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

Nonstructural Damage

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

Transportation & Lifelines

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

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

Emergency Response

The California Office of Emergency Services (OES) activated its Region I Emergency Operations Center (EOC) in Los Angeles and attempted to determine the level and location of earthquake damage. Region I staff, supplemented by staff from the State Department of Transportation, the State Department of Health Services, and the Southern California Earthquake Preparedness Project (SCEPP), also processed requests for volunteer assistance from the California Conservation Corp

(CC) and the OES engineers program. At approximately 3:45 p.m. on October 1, the California Earthquake Prediction Evaluation Council (CEPEC) convened via a conference call from the EOC to ascertain, to the extent possible, the probability that the initial earthquake would be followed within the next several days by a shock of equal or greater magnitude. The consensus of the Council was that the likelihood of such an event was less than 5%.

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

Evacuations

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

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

Mutual Aid

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

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

Communications

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

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

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

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

Fires and Hazardous Materials

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

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

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

Mass Care

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

Initial Recovery

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

The Northridge Earthquake

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

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

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

Effects of the Northridge Earthquake

At 4:31 a.m. on January 17, 1994, eight miles below the surface of the northwestern end of the San Fernando Valley, the magnitude 6.7 earthquake generated intense shaking that caused widespread damage and enormous economic loss. The communities of Northridge, San Fernando, West Hollywood, Santa Clarita, Fillmore, Simi Valley, and Sherman Oaks were the hardest hit, but strong shaking and vulnerable buildings caused extensive damage as far away as central Los Angeles, Santa Monica, and Whittier.

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

People

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

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

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

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

Buildings

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

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

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

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

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

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

Fires

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

Nonetheless, there were several problem areas:

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

Lifelines

Lifelines – transportation systems, communications, and water, gas, and electric utilities – suffered extensive damage. The effect of individual lifeline failures and combined failures is both direct (gas fires) and indirect (interference with emergency response). The combined loss of water pressure, electrical power, emergency power, and communications, coupled with significant gas-related fires, present a clear and unacceptable hazard with far-reaching implications for emergency response and disaster recovery. Only good fortune prevented an even greater disaster.

Transportation Systems

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

Communications

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

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

Electricity

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

Gas

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

Water

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

The Economy

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

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

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

Insured losses exceeded insurance industry expectations, illustrating the importance of reducing earthquake risk. The California Department of Insurance estimates that over 300,000 claims for earthquake damage repair had been filed as of October 1, 1994. The size of individual claims from the

Northridge earthquake has been, on average, two or three times greater than claims from previous earthquakes. Insurance companies expect to pay approximately $11 billion in claims, and some have been driven to the brink of insolvency. Many insurance companies believing their earthquake insurance risk exceeds their ability to pay future claims, have moved to limit the number of policies written for earthquake and homeowners' coverage in California. Lasting effects will be felt in terms of the availability of insurance, the amount paid for premiums, and the quality of coverage.

Geologic and Geotechnical Aspects of the Northridge Earthquake

The Northridge earthquake occurred at a depth of approximately nine miles beneath the earth's surface on a buried, or "blind", thrust fault. It produced intense shaking and caused extensive damage that reaffirmed the potential risk from this type of fault – and the need to mitigate that risk.

The earthquake was th4e most recorded earthquake that has ever occurred in California. Strong-motion instrument recordings were obtained at 257 sires. Over 11,000 aftershocks have been recorded by these instruments. By maintaining and enhancing data collection programs and identifying areas that have faults capable of causing earthquakes, California can learn to better reduce its seismic risk.

The Northridge earthquake also caused secondary hazards, the most prominent of which was localized amplifications of the ground motion caused by local geologic conditions. The identification and mitigation of secondary hazards, such as landslides, liquefaction, and areas that may amplify shaking, need to be integrated into land use planning programs, building codes, and engineering practices.

The Northridge earthquake provided many geologic, seismologic and geotechnical data that are still being compiled and analyzed. A significant value of the Northridge earthquake data is their use in the development and calibration of methods for assessing seismic hazard for planning and engineering applications. For example, the Northridge event occurred on a buried fault, highlighting the need to characterize and include earthquakes on this type of fault in their analysis of the ground motion component of the overall seismic hazard, It also reaffirmed that most of the hazard associated with earthquakes typically comes from strong shaking.

Strong Ground Motion

The Northridge earthquake was a moderate earthquake that produced strong ground motions and intense shaking. The term "moderate" describes the *magnitude* of the earthquake, which in this case was 6.7. Moderate earthquakes (less than magnitude 7.0) generally produce localized shaking of intensity (that is, amplitude of motion and frequency content) on stiff structures similar to that of major earthquakes (magnitudes of 7.0 and above). However, a more extensive area experiences intense shaking in a higher-magnitude earthquake and the duration of the shaking, the length of time the strong motion lasts generally increases with increases in magnitude. Since a higher-magnitude earthquake affects a larger area and lasts longer, it can be expected to cause greater damage.

A number of factors affect the amount of damage to structures in an earthquake, but the intensity of shaking is of paramount importance. Shaking intensity is affected by the magnitude of the earthquake, its style of faulting, local geologic conditions, proximity to the fault rupture, and the rupture geometry along the fault. The Northridge earthquake's strong-motion records reveal extensive information about the nature of the shaking, including acceleration, velocity, displacement, duration, and frequency, the consensus of earth scientists and geotechnical engineers is that the earthquake's motions were not unusual for a thrust-fault earthquake of this magnitude. However, this earthquake clearly points out the importance of near-source effects and local geologic conditions on shaking intensity and the need to incorporate these phenomena in seismic design and construction.

Accelerations

Peak accelerations, which h are not necessarily the best measurement for correlating ground motion with the forces in structures, typically ranged from 0.4g to 0.8g in the regions that suffered significant damage. Recorded peak horizontal accelerations typically ranged between 0.1g and 0.5g at distances between 12 and 30 miles from the rupture zone, although some higher accelerations were recorded due to local geologic or topographic conditions. Horizontal accelerations exceeding 0.9g were re4corded in the San Fernando Valley and in Santa Monica, nearly 14 miles away from the epicenter. The highest recorded free-field accelerations, 1.82g horizontal and 1.18g vertical, were at the Cedar Hill Nursery in Tarzana, three miles south and west of the epicenter. Instruments near an abutment to the Pacoima Dam recorded peak accelerations of 2.3g horizontal and 1.5g vertical, although the free-field accelerations on alluvial materials near the base of the dam were less than 0.5g.

There was initial speculation that much of the damage in the Northridge earthquake was caused by abnormally high vertical accelerations. Although vertical accelerations were high in some locations, so was the horizontal acceleration. The ratio of vertical to horizontal acceleration was consistent with previously recorded data. Modern building codes are based on assumptions that the maximum vertical accelerations will be two-thirds of the peak horizontal acceleration. An analysis of Northridge records indicates that, although this ratio was exceeded at a number of locations, on average, it held true (Shakal et al., 1994). The Commission has not received evidence that vertical accelerations played an unusual role in the damage caused by the Northridge earthquake.

Velocity and Displacement

The intensity of shaking is typically described by acceleration recordings. The Northridge earthquake also produced high velocities and displacements not described in acceleration data. A velocity of 56 inches per second was recorded in a parking lot at the Sylmar County Hospital, and a velocity of 72 inches per second was recorded at the Rinaldi receiving station. Peak velocity is important because it is a good indicator of an earthquake's demand potential (or energy) on multistory structures.

Ground displacement also is a significant factor in the design of structures, especially for seismically isolated structures. Ground displacement of 31 inches was measured at the Sylmar County Hospital parking lot. Base-isolate structures are normally separated from the surrounding soil to allow room for movement. Although seismically isolated structures are isolated from high-frequ4ncy shaking during an earthquake, they may collide with building foundation stops or barriers if actual displacements exceed the anticipated or design displacements. Such collisions would result in high impact forces that fan cause significant damage and even collapse.

Near-Source Effects

The near-source region of an earthquake can be defined as the region within several miles of where the projection of the fault rupture plane meets the ground surface. Within this region, the ground motion may be characterized by pulses of high velocity that are potentially damaging to certain types of structures. The near-source area in a strike-slip earthquake would have a different shape (generally longer and narrower, extending on both sides of the fault rupture for the length of the rupture), and the nature of the near-source strong motion would also vary, depending on other non-source effects such as local geologic conditions.

Although seismologists have known of the influence of near-source effects on seismic shaking for some time, near-source effects first gained the interest of California engineers following the 1971 San Fernando earthquake. Failure of the Olive View Hospital in 1971 was attributed, in part, to a large, long-period near-source "seismic pulse". Near-source effects have been considered in the design of some critical facilities for a number of years. However, the implication of near-source effects have only recently been studied for use in the design of conventional structures because previous earthquakes have not struck well-instrumented urbanized areas and, therefore, produced few recorded motions from areas close to the source. At present, near-source effects are not explicitly considered in the building codes except for seismically isolated structures.

Near-source effects of engineering interest are related to the direction and mechanics of the fault rupture. The numerous localized, relatively rapid failures of “patches” of the fault surface causes significant high-frequency motion and allows permanent coseismal displacement of the fault and surrounding area. Known as source-effect phenomena, these factors affect the amplitude and frequ4ency content of shaking.

Of critical importance to the design of engineered structures is that near-source effects combined with local geologic effects an adversely alter the seismic performance of a wide range of structures, including high-rise and base-isolated buildings. Data recorded during the Northridge earthquake clearly indicate the need to incorporate measures to mitigate this hazard in building codes. High-0velocity pulses in the near-source area are believed by some to be a cause of much of the damage. These pulses were the larges t in the northern San Fernando Valley and Santa Susana Mountains. They were also significant in the southern San Fernando Valley.

Duration of Strong Motion

The longer ground shaking lasts, the greater the damage to structures, natural slopes, and fills. When strong shaking ceases, there is a reasonable possibility that the damage will not continue. However, if the shaking continues after damage has been initiated, structures will continue to degrade and may eventually collapse. Damage caused by seismic consolidation and liquefaction also increases as duration increases. The duration of intense shaking during the Northridge earthquake was relatively short, on the order of nine seconds or less. Had the earthquake’s magnitude been larger, there is little doubt that the strong shaking would have lasted longer and the damage would have been greater. Strong shaking has lasted minutes in some other events.

The duration of intense shaking, like near-source effects, is not explicitly considered in out building codes Because an urbanized area of California has not yet been exposed to long-duration near-source effects, the effect of durations on various types of structures is not fully understood.

Response Spectra

Response spectra are graphs that display the response of structures to ground motion associated with earthquakes. A spectrum graphically depicts the variation of spectral accelerations (velocities or displacements) experienced by simple structures with different stiffness or periods of vibrations (expressed in seconds). Although some recorded Accelerations in this earthquake were especially high, most spectra generally agreed with those recommended by site-specific geotechnical studies as the basis for the design of special structures. Similar response spectra have been calculated from data from numerous earthquakes since the 1971 San Fernando event and should be expected in future events.

Engineers use *design* spectra to determine the design parameters to use when designing stuffier. The values of design spectra are not the same as those of response spectra computed from measured ground motion. Design spectra are modified from response spectra to reflect safety factors and the performance of materials and structural systems observed in past earthquakes.

Because of the damage from this earthquake, questions have been raised concerning the adequacy of the building code’s definition of the forces that earthquakes can impose on buildings. Code writers and designers know that code spectral values will likely be exceeded in large earthquakes and that this was anticipated when the code was written.

The recorded data from the Northridge earthquake are still being evaluat4ed and are subject to different interpretations. Strong motion instruments also were not located in many of the areas that suffered the most sever damage. Generally speaking, the motions recorded near the Northridge epicenter wee compatible with those used as the basis for the code, but the motions exceeded those assumed in the code in some cases. At some locations, particularly in the near-source areas and in areas with unique local geology, shaking exceeded the assumptions underlying design values in the short- to mid-period range. This shaking appears to have affected low- and mid-rise buildings and caused response in higher modes of vibration for tall buildings. Velocity- and displacement-sensitive structures also may have been affected by the velocity pulses described earlier. Near-source and local geological effects must be considered in the design of structures. There is no compelling evidence that changes to the code's assumed force levels are necessary. However, changes are necessary regarding the treatment of effects of near-source and local geologic conditions.

Strong-Motion Instrumentation

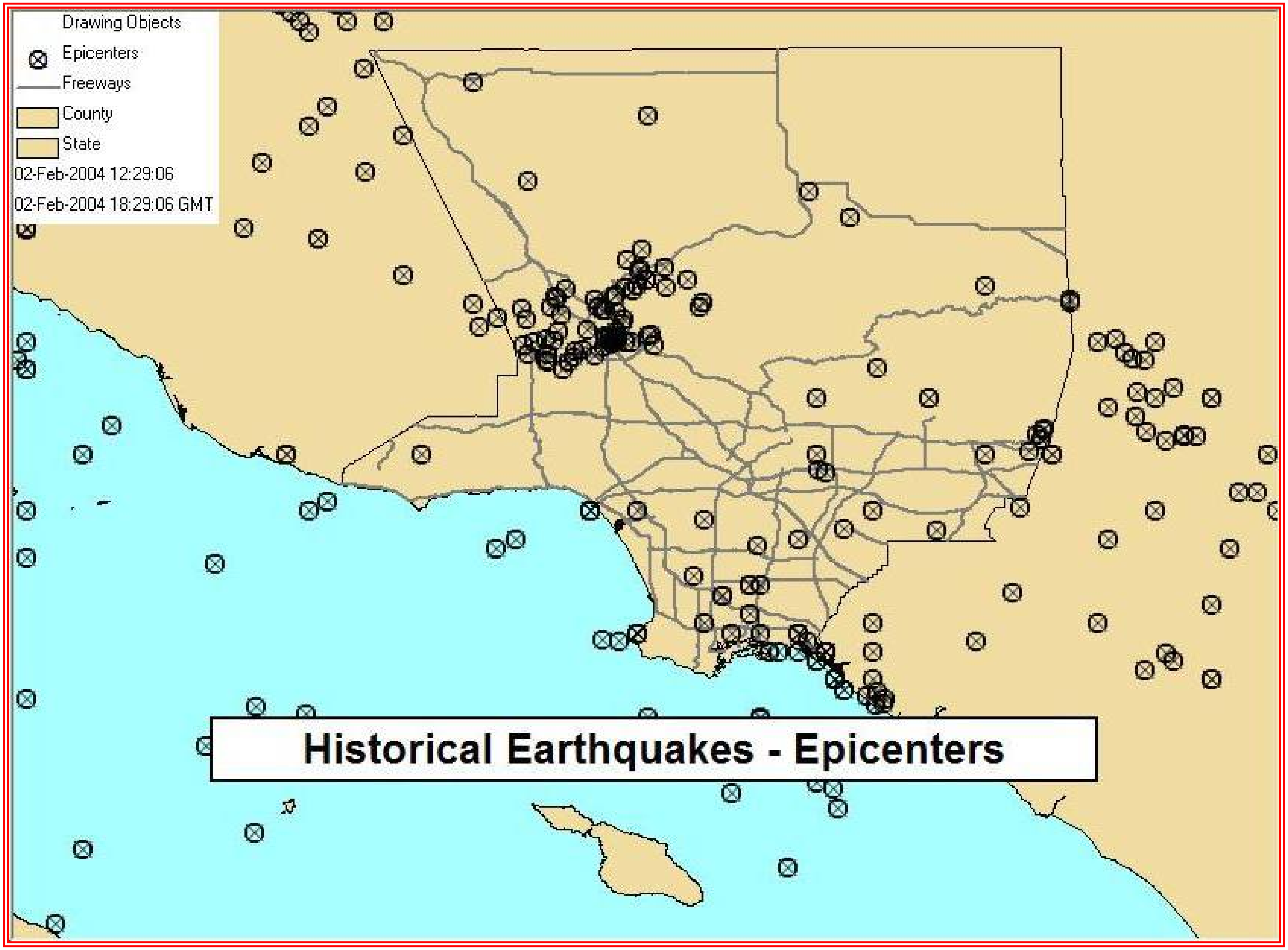
The timely release of strong-motion data, especially during the days immediately following an earthquake, is invaluable to building owners, emergency responders, and those who will revise codes and design practices. Much of the evidence of an earthquake's effects disappears quickly as demolition, repair, and reconstruction takes place. The opportunity to compare building performance and earthquake effects with actual motion data helps practicing engineers and researchers understand their observations, which in turn helps strengthen building codes and reduce future earthquake damage.

The Strong Motion Instrumentation Program (SMIP) proved its worth during this earthquake and its aftermath. Within a day of the main shock, SMIP had issued a "Quick Report" containing copies of strong-motion records obtained by four of its stations; copies of records for nine additional stations were released the following day. By the third day, copies of records for 28 stations had been made available, and by January 25, five quick reports had been released, providing peak acceleration data for 68 stations. In mid-February, SMIP issued a report containing pertinent station information, known geologic site conditions, peak acceleration data, and traces of recordings from 193 stations. SMIP also processed significant records rapidly and released processed data from five stations during the first week of February; additional releases followed at three- to four-week intervals. Processed data for more than 70 stations were released by December 1994. The timeliness and quality of these data were extremely valuable.

The U.S. Geological Survey (USGS), utilities, dam owners, and researchers funded by the National Science Foundation (NSF) operate networks of hundreds of free-field and structural strong-motion instruments scattered throughout California. A considerable public investment has been mad in developing and maintaining USGS- and NSF-funded strong-motion networks. For example, the USGS strong-motion network in southern California consists of nearly 100 stations, while the University of Southern California network originally consisted of 80 free-field stations. Many of these instruments are old analog-type devices; the data they collect require considerable processing before they can be used. Because these arrays complement the SMIP instruments and record motion in different areas, data from these networks are vital to understanding the distribution and severity of shaking resulting from the earthquake. The USGS released photocopies of records obtained from 150 individual accelographs in February 1994. However, data from the USGS- and NSF-funded networks wee not processed in a timely manner following the Northridge earthquake. USGS data were released to the scientific and engineering community in December 1994, but NSF-funded data wee not released as of that date. This situation is unacceptable; a mechanism is urgently needed to correct this problem.

Reference Stations

Most free-field strong-motion stations were installed in locations near active faults to collect data for use in understanding the physics of earthquakes to be better able to estimate ground motion in future earthquakes. Such studies are vital to an understanding of the earthquake processes and such instrument deployments need to continue. However, there is also an urgent need for free-field strong-motion data as references to establish the levels of ground shaking experienced by buildings and other structures. Without such data, engineers cannot assess whether buildings performed as intended and determine the changes needed in codes and design practices to improve performance. For example, there were few free-field instruments in the immediate vicinity of damaged steel-frame buildings, so the levels and character of shaking experienced by these buildings were not well understood. The lack of reliable ground-motion data makes it extremely difficult to understand the causes of these failures and find acceptable solutions. None of the existing programs is directed toward obtaining the reference ground-motion data that are needed.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State
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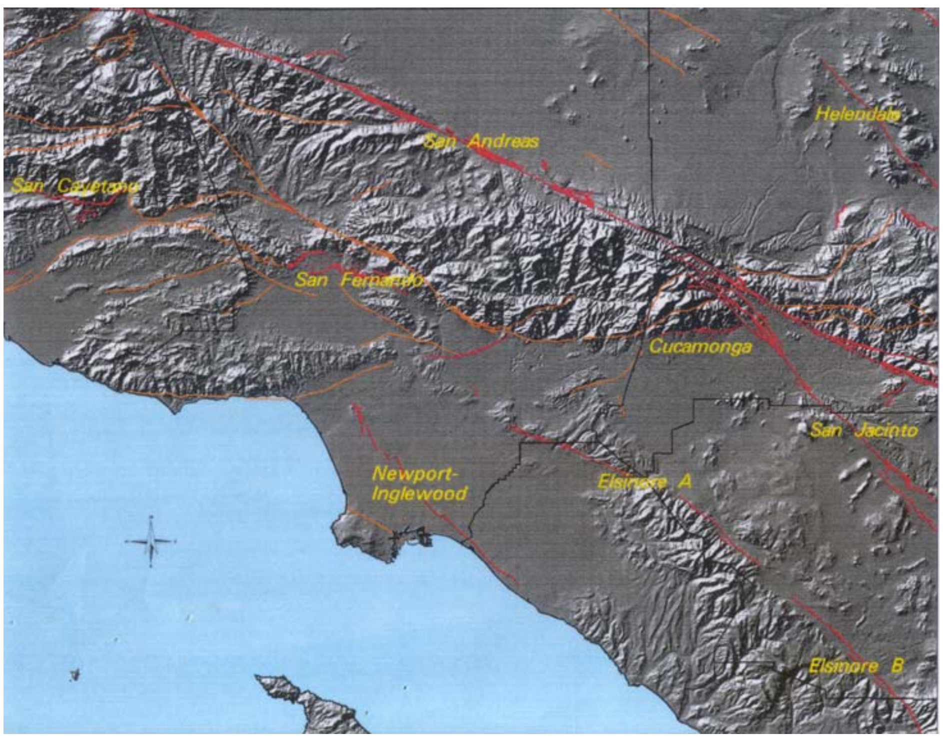
Historical Earthquakes - Epicenters

Faults

Historical and geological records show that California has a long history of seismic events. Southern California is probably best known for the San Andreas Fault, a 400 mile long fault running from the Mexican border to a point offshore, west of San Francisco. "Geologic studies show that over the past 1,400 to 1,500 years large earthquakes have occurred at about 130 year intervals on the southern San Andreas fault. As the last large earthquake on the southern San Andreas occurred in 1857, that section of the fault is considered a likely location for an earthquake within the next few decades."[1]

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



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

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

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http://pubs.usgs.gov/gip/earthq3/when.html


STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF CONSERVATION
DIVISION OF MINES AND GEOLOGY
JAMES F. DAVIS, STATE GEOLOGIST
INGLEWOOD QUADRANGLE
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7.5 MINUTE SERIES (TOPOGRAPHIC)
INGLEWOOD
HAWTHORNE
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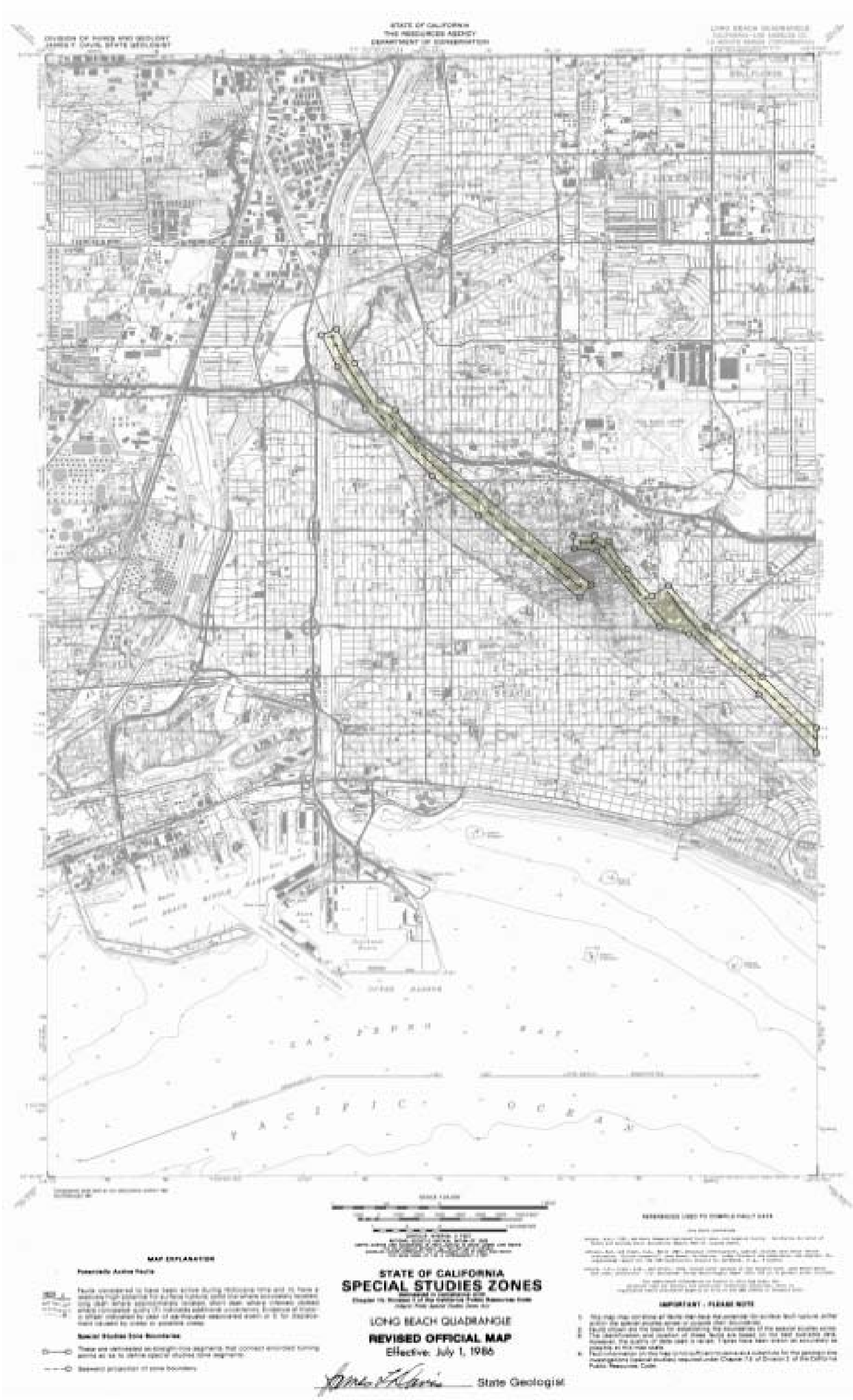
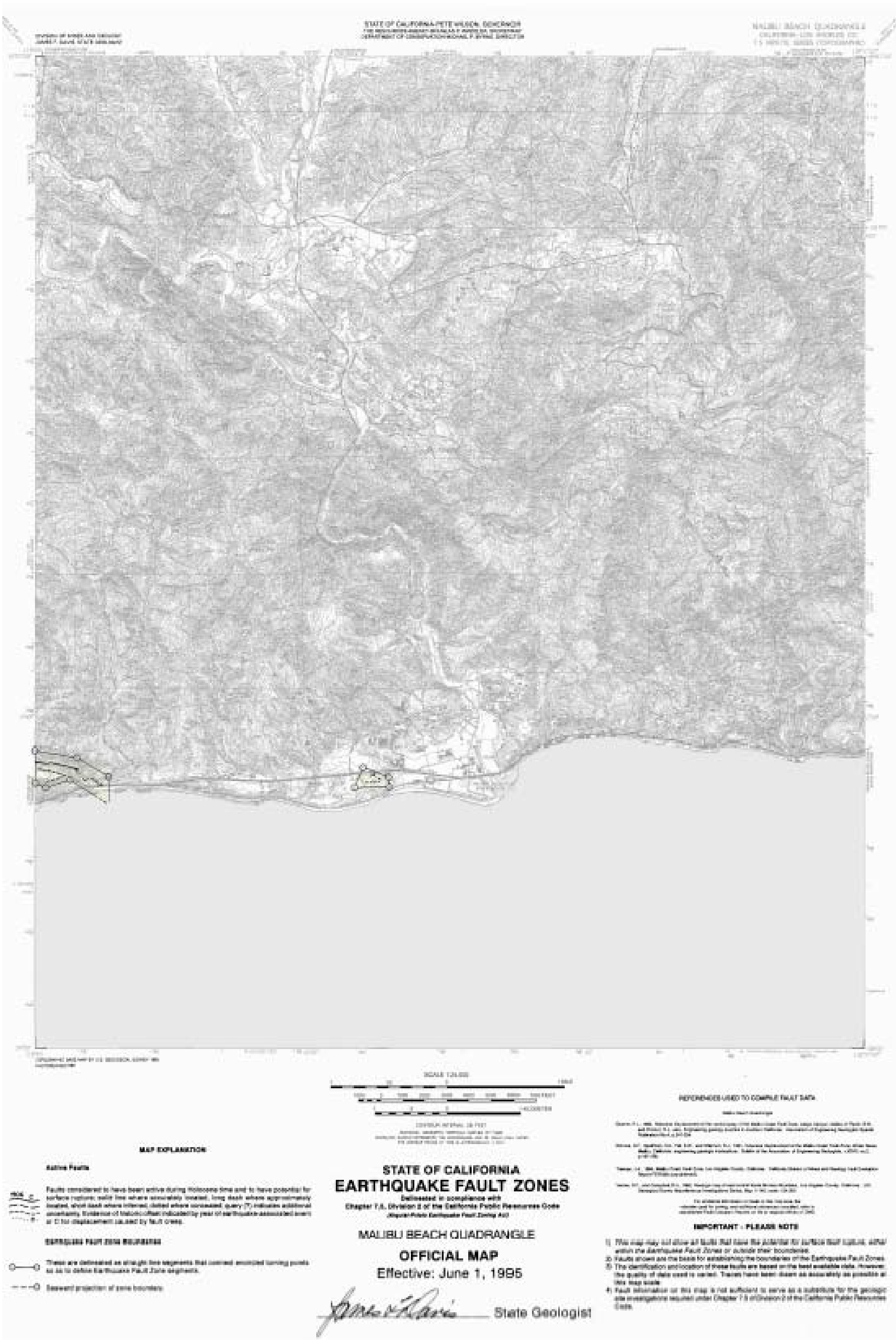
LAWNDALE
TORRANCE
MAP EXPLANATION
Potentially Active Faults
Special Studies Zone Boundaries
STATE OF CALIFORNIA
SPECIAL STUDIES ZONES
INGLEWOOD QUADRANGLE
REVISED OFFICIAL MAP
Effective: July 1, 1986
State Geologist
IMPORTANT - PLEASE NOTE
REFERENCES USED TO COMPILE FAULT DATA


STATE OF CALIFORNIA
SPECIAL STUDIES ZONES
LONG BEACH QUADRANGLE
REVISED OFFICIAL MAP
Effective: July 1, 1986
State Geologist
MAP EXPLANATION
PACIFIC OCEAN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EARTHQUAKE FAULT ZONES
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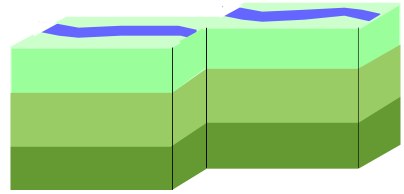
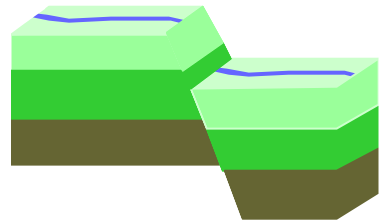
Effective: June 1, 1995
State Geologist

Fault



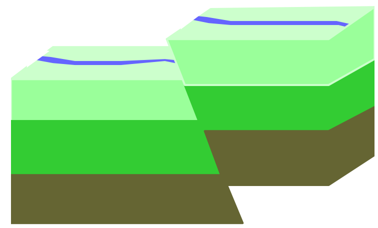
A fault is a fracture along between blocks of the earth's crust where either side moves relative to the other along a parallel plane to the fracture.

Strike-slip



Strike-slip faults are vertical or almost vertical rifts where the earth's plates move mostly horizontally. From the observer's perspective, if the opposite block looking across the fault moves to the right, the slip style is called a right lateral fault ; if the block moves left, the shift is called a left lateral fault.

Dip-slip

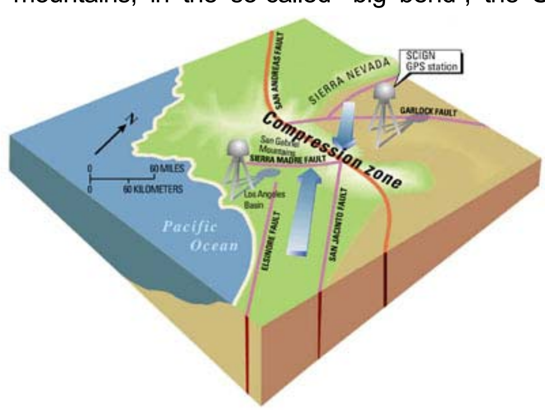


Dip-slip faults are slanted fractures where the blocks mostly shift vertically. If the earth above an inclined fault moves down, the fault is called a normal fault, but when the rock above the fault moves up, the fault is called a reverse fault. Thrust faults have a reverse fault with a dip of 45 ° or less.

The earthquakes of California are caused by the movement of huge blocks of the earth's crust. Southern California straddles the boundary between the Pacific and North American plates. These large sections of the earth's crust (the North American plate extends east to Iceland while the Pacific plate extends west to Japan) are moving past each other. The Pacific plate is moving northwest, scraping horizontally past North America at a rate of about 50 millimeters (2 inches) per year.

About two-thirds of this 50 millimeters per year occurs on the San Andreas fault and some parallel faults—the San Jacinto, Elsinore, and Imperial faults. These four faults are among the fastest moving, and therefore most dangerous, in Southern California. Over time, these four faults produce about half of the significant earthquakes of our region.

However, this is not the whole picture. Unlike central and Northern California, much of this plate movement in Southern California is not parallel to the San Andreas fault. Between the southern end of the San Joaquin Valley and the San Bernardino mountains, in the so-called "big bend", the San Andreas fault runs in a more westerly direction.

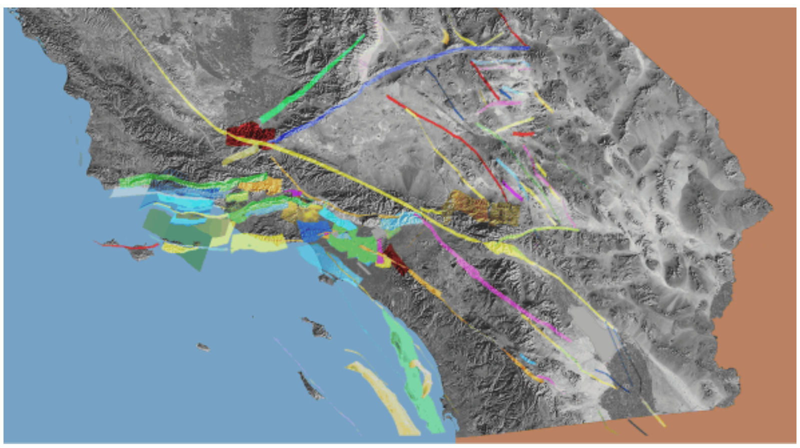


A schematic block model of Southern California showing the motion of the Pacific and North American plates, and the big bend of the San Andreas fault where the plates squeeze together.

Where the fault bends, plate motion is complex. The Pacific and North American plates push into each other, compressing the earth's crust into the mountains of southern California and producing faults and earthquakes. While these 300 or so faults are generally much shorter and slower moving than the four faults mentioned previously, over half of the significant earthquakes in southern California occur on these faults.

The greatest concentration of these faults is in and near the mountains that have formed around the big bend of the San Andreas fault (the San Bernardino, San Gabriel, and Santa Ynez mountains). These mountains, like most mountains in California, are there because earthquakes are pushing them up. Many of these faults can be detected at the earth's surface, though some are buried beneath the sediments of the Los Angeles basin and the inland valleys.

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



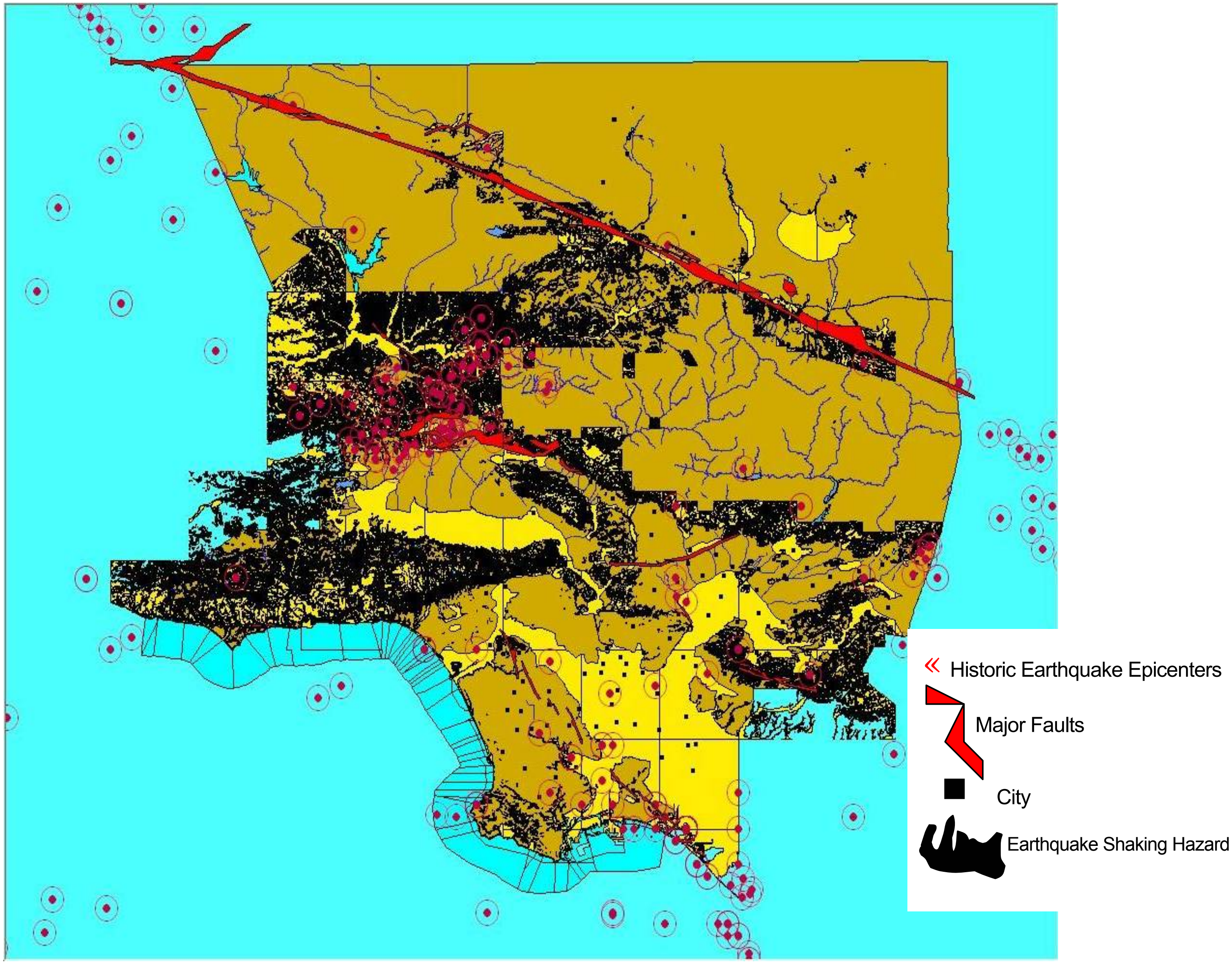
Geologic Rates

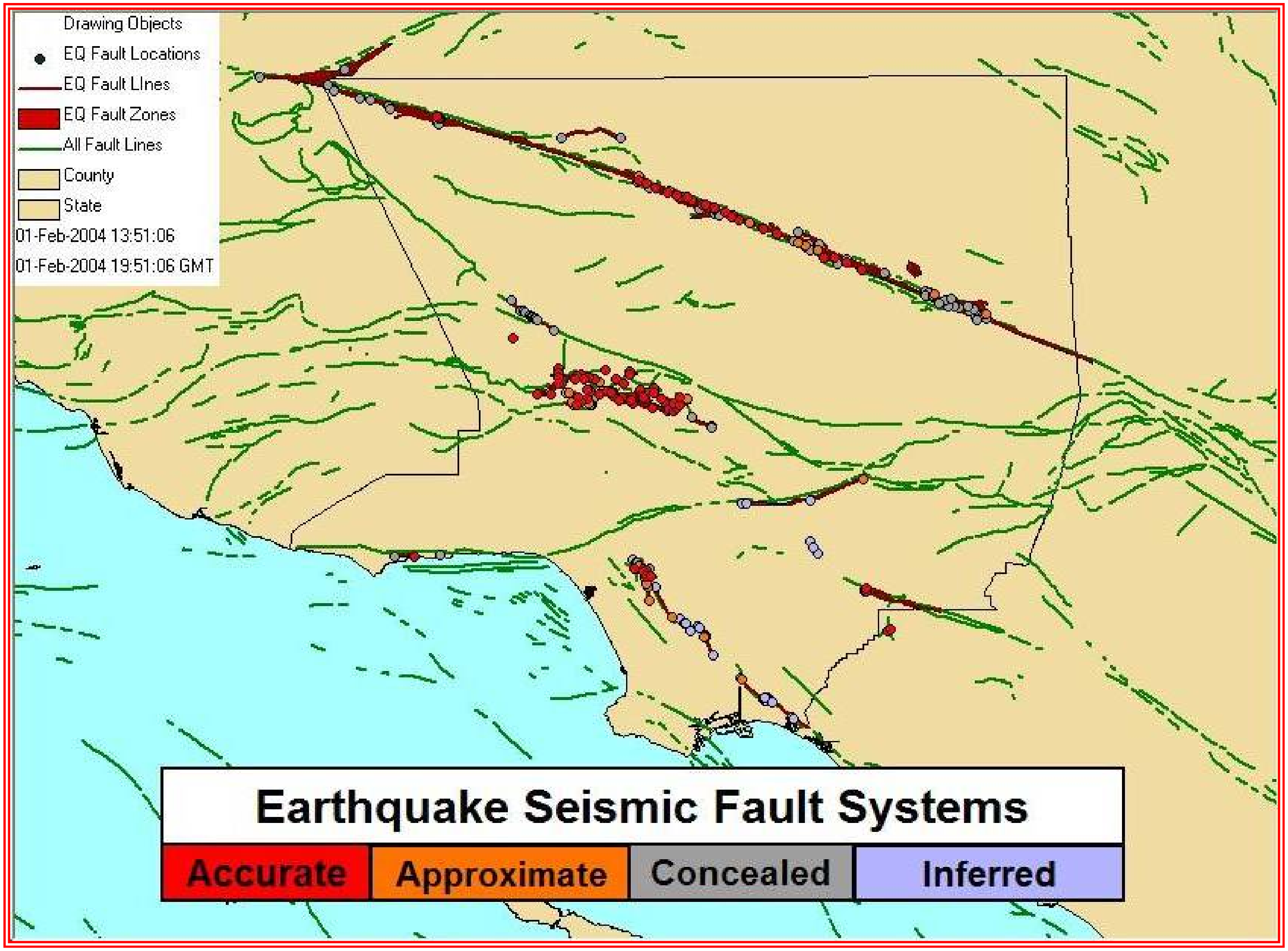
The movement between the Pacific and North American plates, 50 millimeters (2 inches) each year, is about how fast your fingernails grow, but it has been going on for eons. Los Angeles City Hall is now 3 meters (10 feet) closer to San Francisco than when it was built in 1924. It would take a mere (geologically speaking) 2 million years for your nails to extend 100 kilometers (60 miles) from San Bernardino to Palmdale. It took many millions of years for our faults to slip enough, and rocks to move enough, to shape Southern California's current landscape.

Unknown Faults

As the Northridge earthquake confirmed, some faults are not known until they move in large and damaging earthquakes. Not necessarily. In 2001, scientists of the Southern California Earthquake Center completed the Southern California Integrated GPS Network (SCIGN), an advanced system of 250 Global Positioning System (GPS) receivers. With this network the positions of locations throughout Southern California can be precisely measured.

By measuring these locations for several years, we can see how different sites are moving relative to each other—for instance, Palos Verdes is moving toward Pasadena at about 4 millimeters (5/32 inch) per year. If movement between two locations is greater than the movement on known faults, then we have a reasonable idea that there may be another fault in the area, perhaps buried by sediment. This can lead to focused research using other methods to identify the unknown fault.


Historic Earthquake Epicenters
Major Faults
City
Earthquake Shaking Hazard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Earthquake Seismic Fault Systems
Accurate
Approximate
Concealed
Inferred

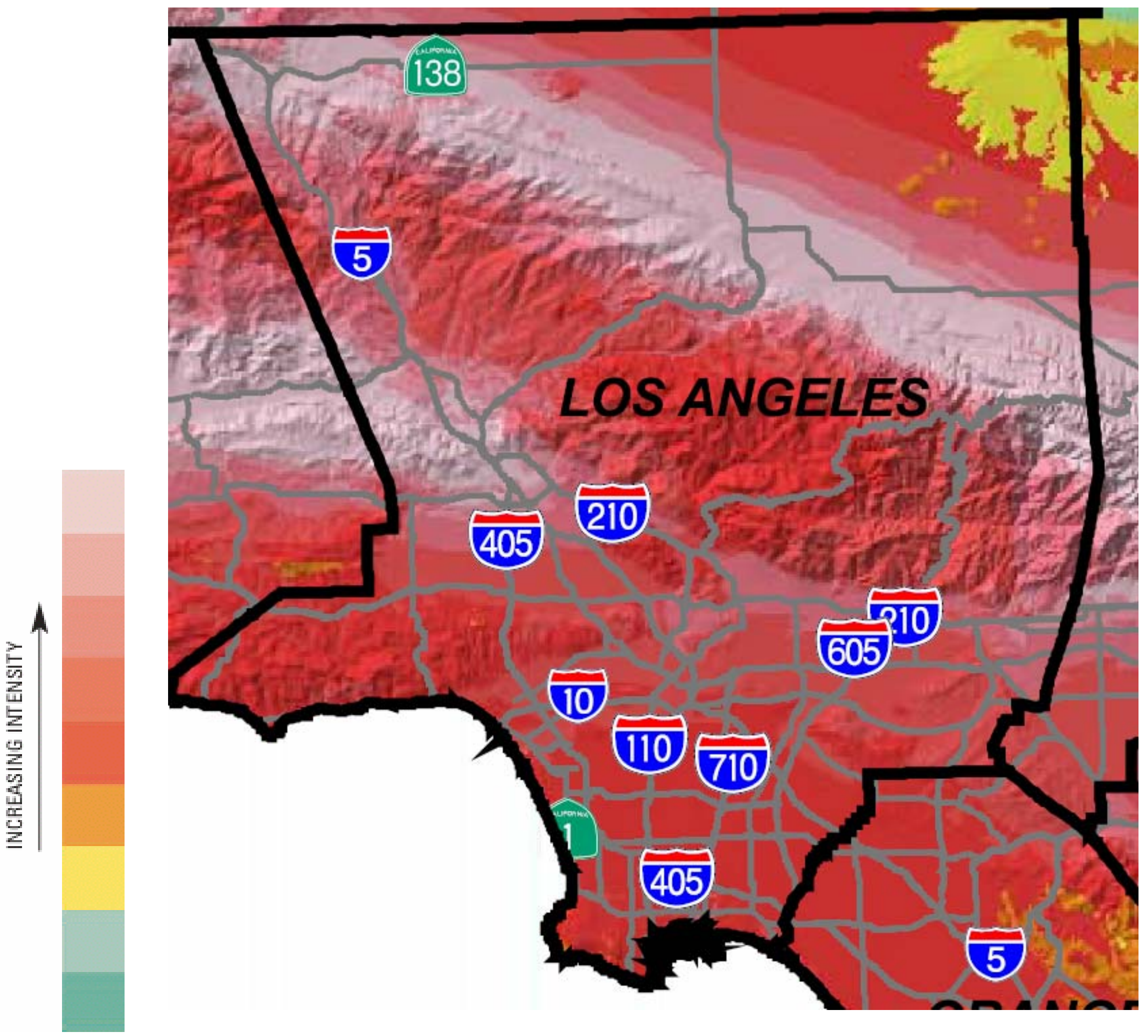
Earthquake Related Hazards

Ground shaking, landslides, liquefaction, and amplification are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

Ground Shaking

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage. The strength of ground shaking depends on the magnitude of the earthquake, the type of fault, and distance from the epicenter (where the earthquake originates). Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock.

These regions are near major, active faults and will on average experience stronger earthquake shaking more frequently. This intense shaking can damage even strong, modern buildings. The regions distant from known, active faults will experience lower levels of shaking.



Earthquake Shaking Potential in Southern California

Residents cannot live in southern California worrying about every one of the more than 300 faults described on the previous page. We also do not need to. As described on pages 8 and 9, the ground shaking in an earthquake depends on the magnitude, the distance from the fault and local soil conditions. For, example, look at the patterns of shaking for two different earthquakes in these figures. The magnitude 4.2 earthquake produced stronger shaking near Beverly Hills than did the much larger but more distant magnitude 7.1 Hector Mine earthquake. These patterns can be simulated by computers to make maps of the shaking to expect from any potential earthquake. Shaking intensities from all possible earthquakes are added to determine the total hazard for each site.

Each area of southern California will be shaken by a different set of earthquakes, though larger earthquakes may shake many areas. In the long run most everywhere in southern California will experience heavy earthquake shaking. Some locations will experience such shaking more frequently because they are closer to more faults or have local soil conditions that amplify earthquake shaking.

Unfortunately, scientists do not yet have the information needed to predict which earthquakes will happen first, so we must be ready for the shaking in our area from any possible earthquake. To help, scientists have summed up the probable shaking from all our known faults to create this map. It shows the relative intensity of ground shaking in California from all anticipated future earthquakes. Areas in red and pink are nearer major, active faults and on average experience stronger earthquake shaking more frequently. Although the greatest hazard is in these area, no region within the state is immune from the potential for earthquake damage.

Rapid Instrumental Intensity Maps

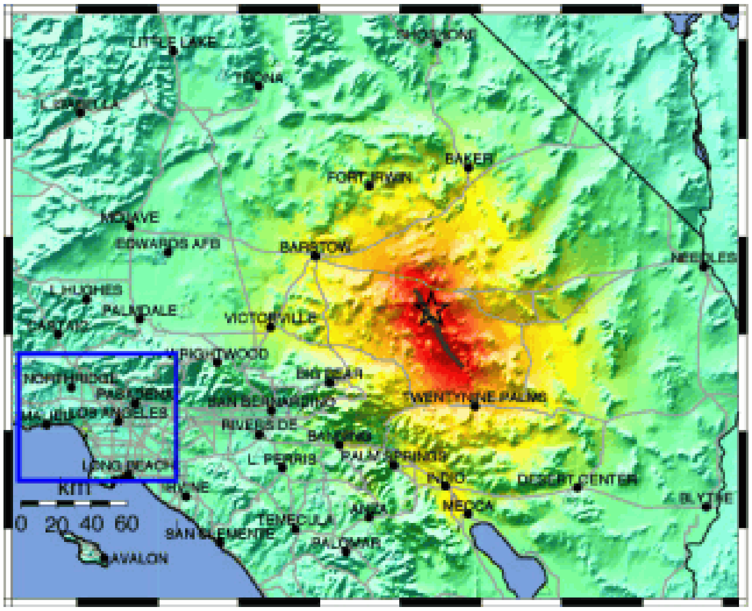
A small nearby earthquake can cause more shaking than a distant large earthquake, as shown in the intensity maps for the magnitude 7.1 Hector Mine earthquake (right) and the magnitude 4.2 Beverly Hills earthquake (below right). The blue square on the map on the right shows the location of the map below.

Vulnerability

According to the Los Angeles County HAZUS Study for earthquakes, a catastrophic earthquake anywhere in the area would potentially damage or destroy approximately 19% of its assets. Structures owned by the Santa Monica-Malibu Unified School District and Santa Monica College are estimated to be vulnerable to the same impact.

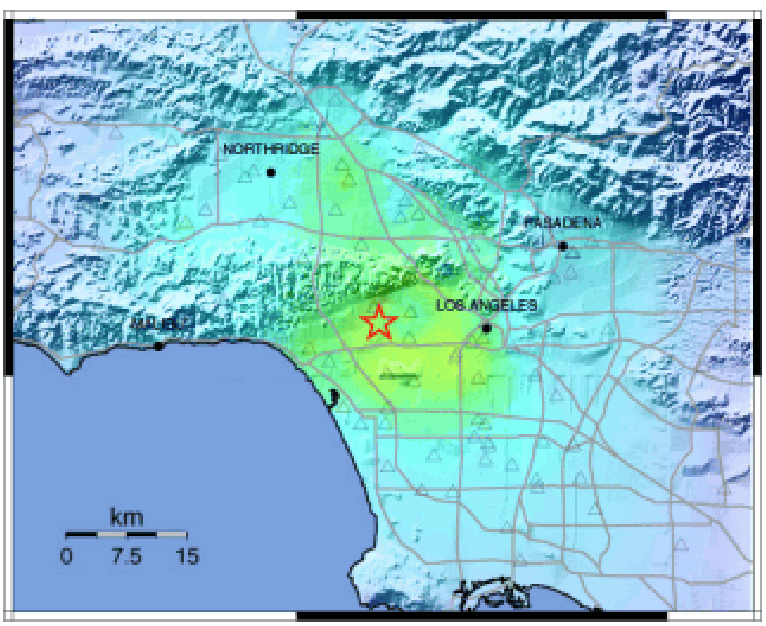
Magnitude 7.1 Hector Mine Earthquake

Saturday, October 16, 1999 03:04:53 a.m. PDT



Magnitude 4.2 Beverly Hills Earthquake

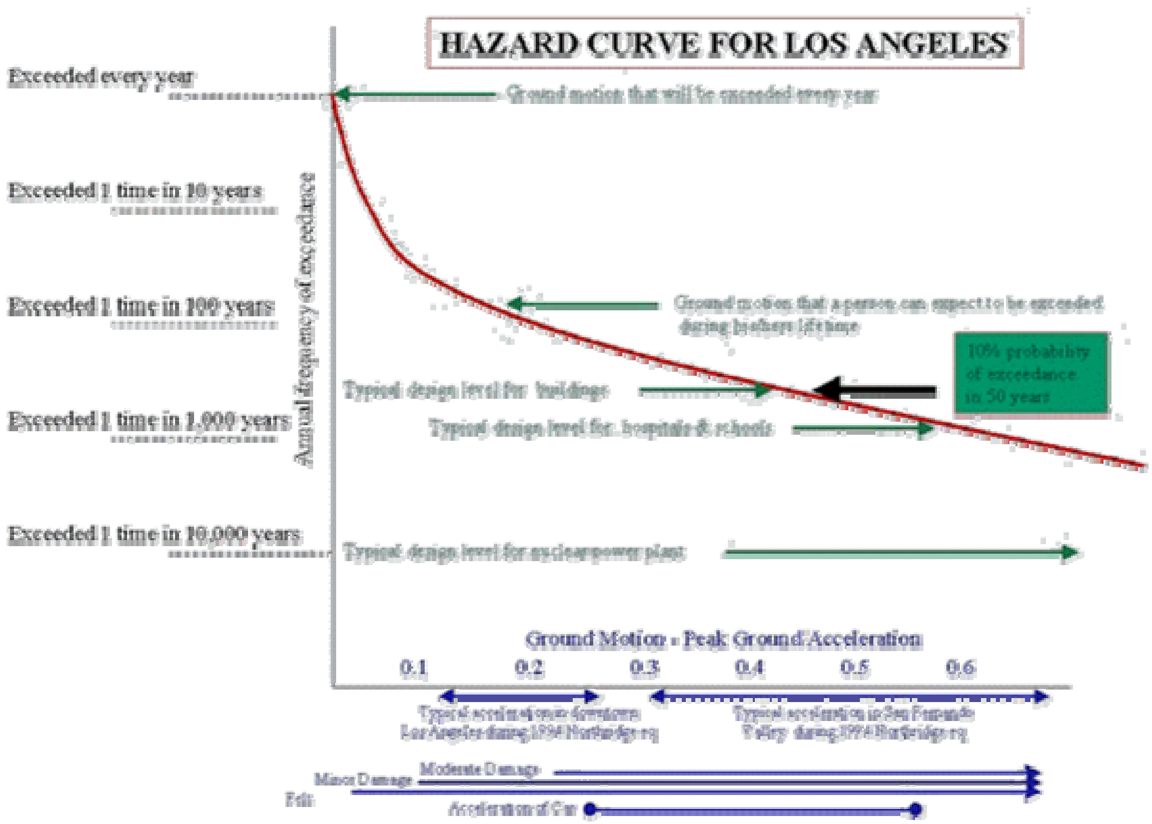
Sunday, September 9, 2001 04:59:18 p.m. PDT



U. S. GEOLOGICAL SURVEY

Hazard Curve

Hazard curves show the probability of exceeding different ground motion values at a site. For example, the 10% probability of exceedance in 50 years is one point on a hazard curve. The hazard curves are important for comparing the hazard at different sites. Some sites may have a high probability of exceeding small ground motions, but a very small probability of exceeding large ground motions. These curves are important for understanding the types of ground motions that one can expect to exceed at a site. Also the hazard curve is important for determining the expected losses. Losses can be caused by frequent smaller events or from less frequent large events. An example of a Hazard Curve is shown below.

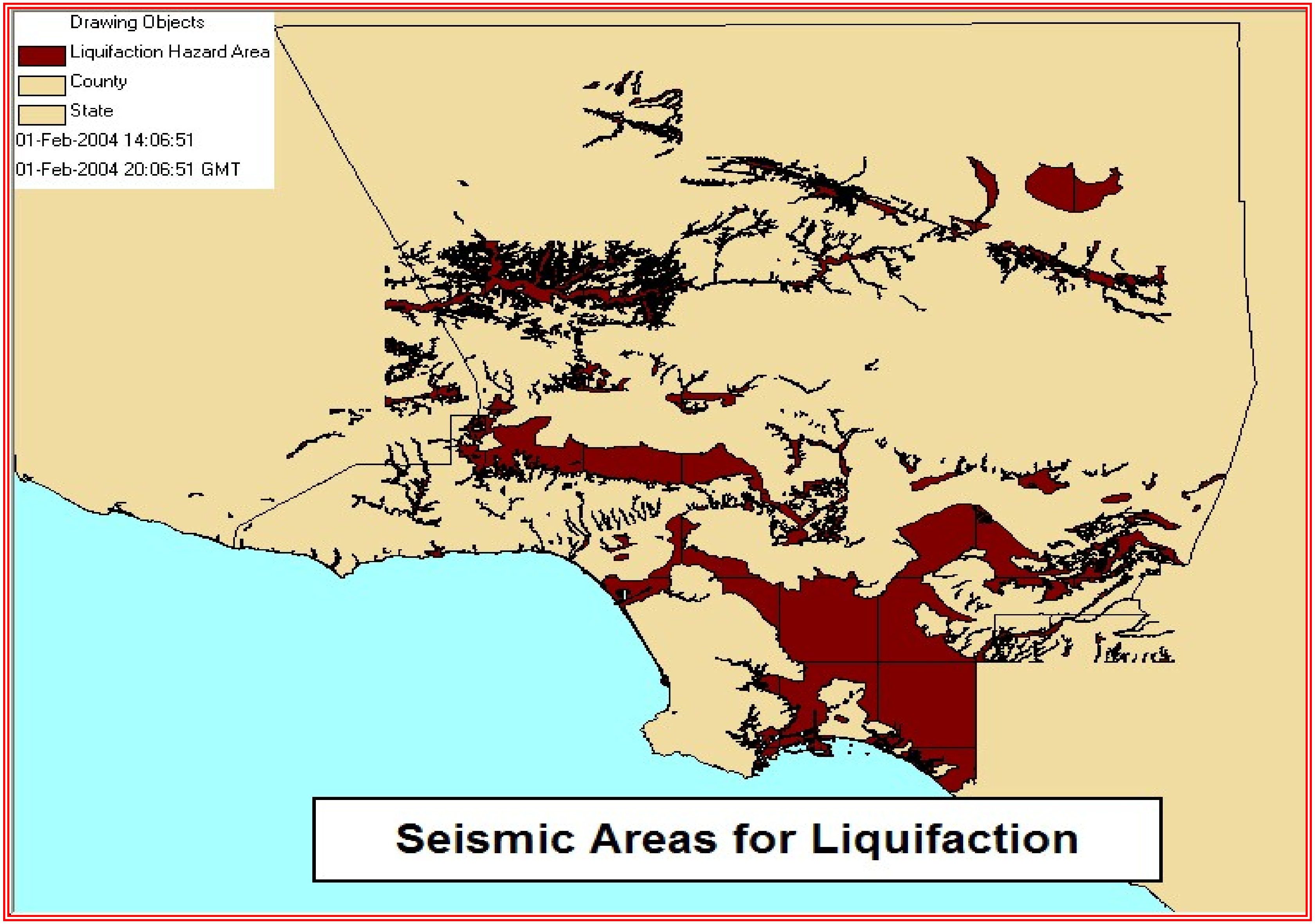


Earthquake Induced Landslides

Earthquake induced landslides are secondary earthquake hazards that occur from ground shaking. They can destroy the roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes.

Liquefaction

Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these buildings and structures. Many communities in Southern California are built on ancient river bottoms and have sandy soil. In some cases this ground may be subject to liquefaction, depending on the depth of the water table.


Drawing Objects
Liquifaction Hazard Area
County
State
01-Feb-2004 14:06:51
01-Feb-2004 20:06:51 GMT
Seismic Areas for Liquifaction

Amplification

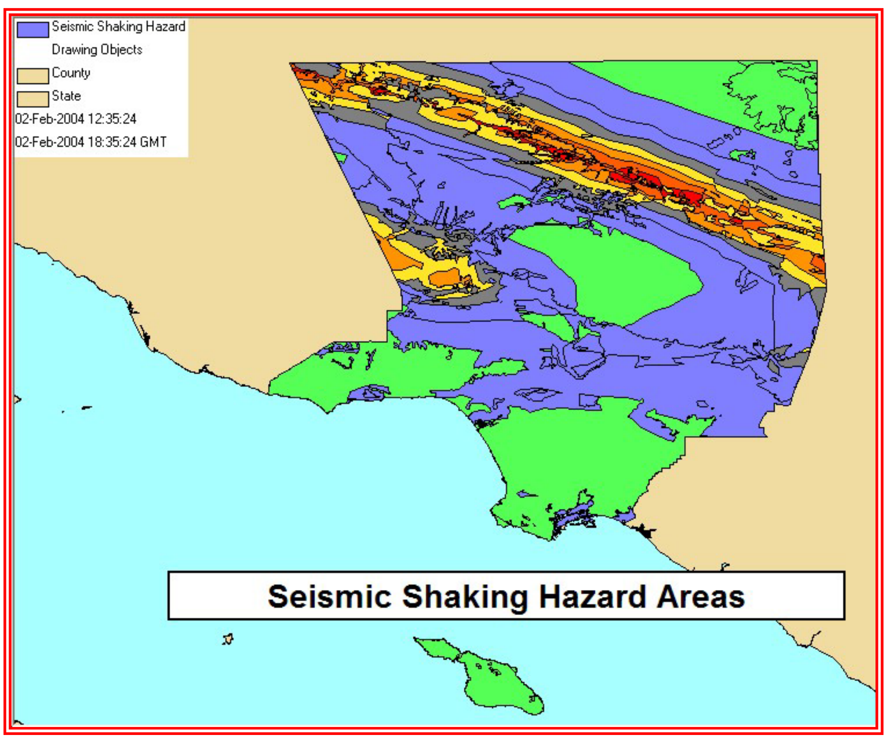
Soils and soft sedimentary rocks near the earth's surface can modify ground shaking caused by earthquakes. One of these modifications is amplification. Amplification increases the magnitude of the seismic waves generated by the earthquake. The amount of amplification is influenced by the thickness of geologic materials and their physical properties. Buildings and structures built on soft and unconsolidated soils can face greater risk. Amplification can also occur in areas with deep sediment filled basins and on ridge tops.

Earthquake Hazard Assessment

Hazard Identification

In California, many agencies are focused on seismic safety issues: the State's Seismic Safety Commission, the Applied Technology Council, Governor's Office of Emergency Services, United States Geological Survey, Cal Tech, the California Geological Survey as well as a number of universities and private foundations.

These organizations, in partnership with other state and federal agencies, have undertaken a rigorous program in California to identify seismic hazards and risks including active fault identification, bedrock shaking, tsunami inundation zones, ground motion amplification, liquefaction, and earthquake induced landslides. Seismic hazard maps have been published and are available for many communities in California through the State Division of Mines and Geology. The map below illustrates Seismic Shaking Hazard Areas in Los Angeles County.



Earthquake Threats to Los Angeles County Communities

HAZUS Earthquake Scenario for Los Angeles County

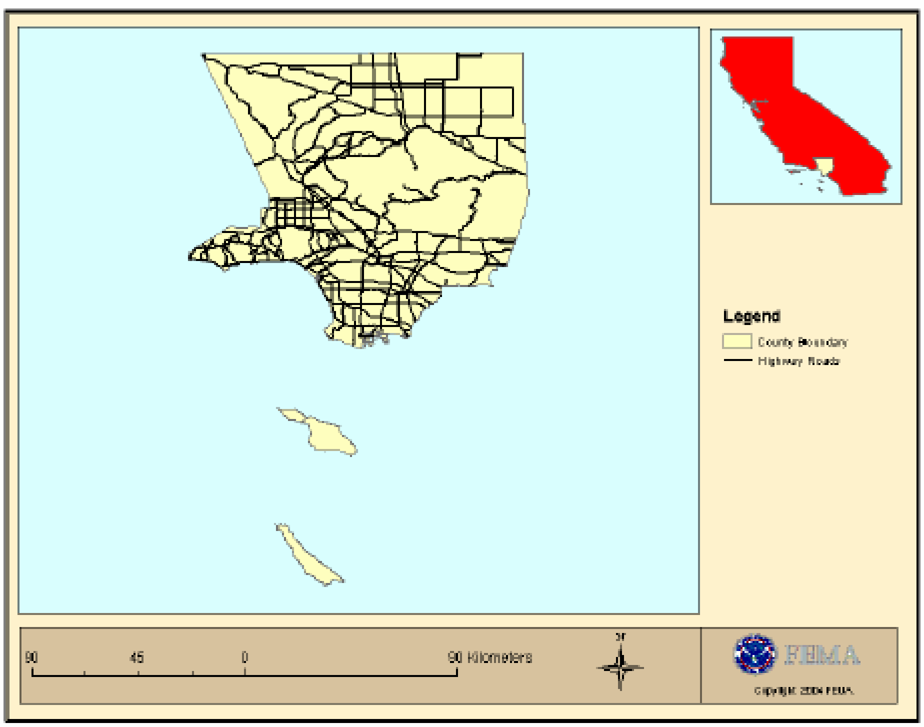
Introduction

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

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

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

Figure 1: County Map - Los Angeles, California

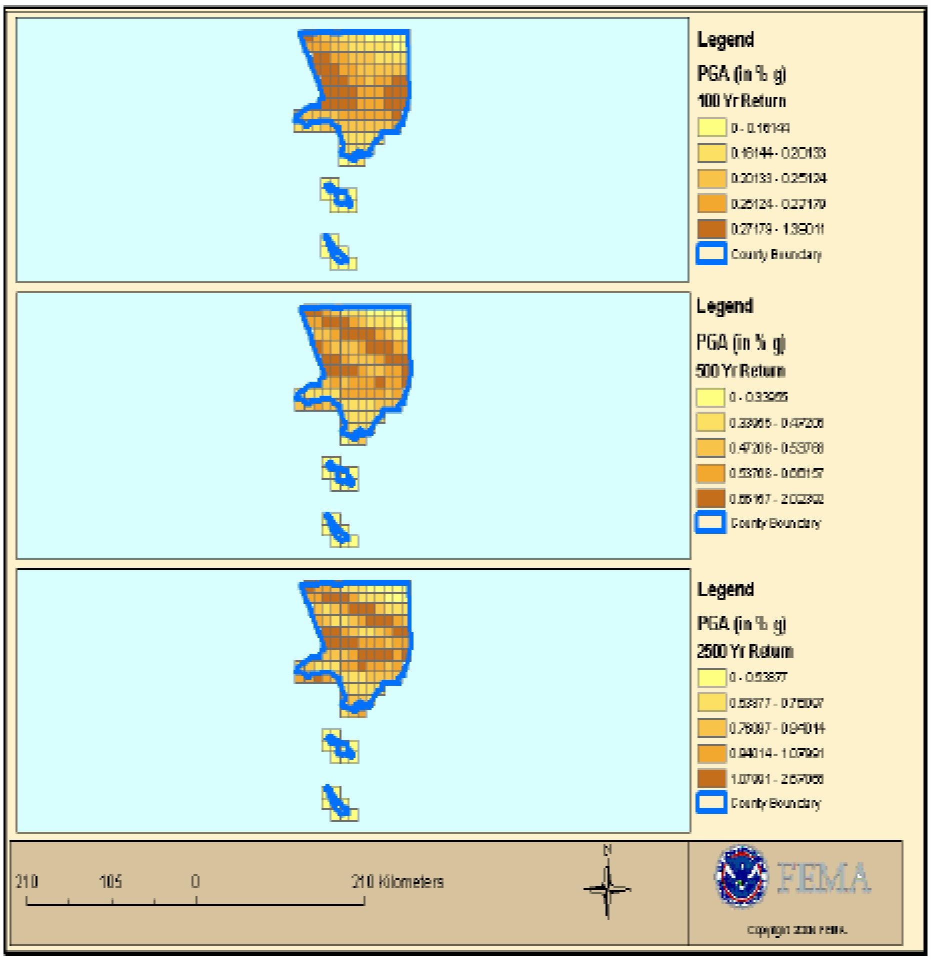


Earthquake Hazard Information

Probabilistic Earthquake Hazard

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

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

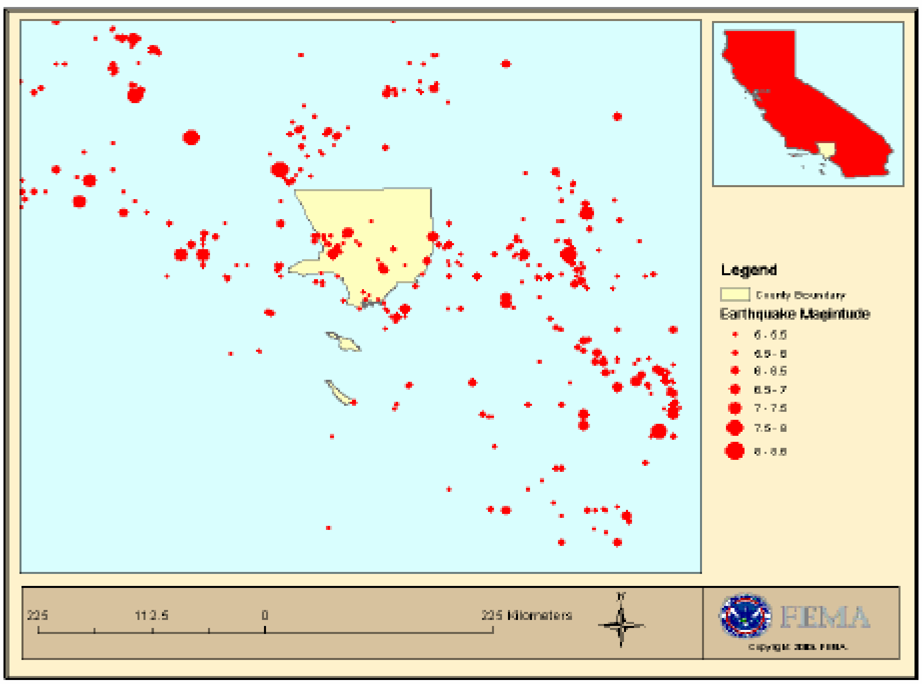


Earthquake Hazard Information (continued)

Historical Earthquake Epicenters

HAZUS contains a catalog of historical earthquake epicenters. The historical epicenter catalog was developed based on information from the CNSS Worldwide Earthquake Catalog (now ANSS), the National Earthquake Information Center (NEIC) database, and the Earthquake Seismicity Catalog Volume 1 (NOAA/USGS).
Figure 3 provides a map of the historical earthquake epicenters that have occurred within 150 km of Los Angeles County. The historical earthquake epicenters (and associated data) shown in the map are also listed in Appendix F of this report.

Figure 3: Historical Earthquake Epicenter Map (within 150 km of county boundary)



Information from the Southern California Earthquake Center

Inventory of Assets: Lifeline Infrastructure

Lifeline Inventory

Within HAZUS, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ferry, ports and airports. There are six (6) utility systems that include potable water, waste water, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data is provided in Tables 3 and 4.

Table 3: Transportation System Lifeline Inventory

System	Component	# Locations / Length	Replacement Value*
Highway	Roadways	2,876 km	$11,300.54M
	Bridges	3,128	$10,914.99M
	Tunnels	17	$34.27M
	Sub-Total		**$22,249.80M**
Railway	Tracks	1,011 km	$869.59M
	Bridges	144	$28.36M
	Tunnels	0	$0.00M
	Facilities	84	$216.08M
	Sub-Total		**$1,114.03M**
Light Rail	Tracks	149 km	$128.53M
	Bridges	28	$6.17M
	Tunnels	0	$0.00M
	Facilities	0	$0.00M
	Sub-Total		**$134.70M**
Bus	Facilities	42	$54.02M
	Sub-Total		**$54.02M**
Ferry	Facilities	0	$0.00M
	Sub-Total		**$0.00M**
Port	Facilities	155	$398.72M
	Sub-Total		**$398.72M**
Airport	Facilities	24	$154.34M
	Runways	38	$1,393.63M
	Sub-Total		**$1,547.97M**
	Total		**$25,499.25M**

* **'M'** in Replacement Value represents Millions

Inventory of Assets: Lifeline Infrastructure (continued)

Table 4: Utility System Lifeline Inventory

System	Component	# Locations / Length	Replacement Value*
Potable Water	Pipelines	0 km	$0.00M
	Facilities	15	$589.41M
	Distribution Lines	43,126 km	$862.53M
	Sub-total		**$1,451.94M**
Waste Water	Pipelines	0 km	$0.00M
	Facilities	19	$1,493.17M
	Distribution Lines	25,875 km	$517.52M
	Sub-total		**$2,010.69M**
Natural Gas	Pipelines	0 km	$0.00M
	Facilities	1	$1.29M
	Distribution Lines	17,250 km	$345.01M
	Sub-total		**$346.30M**
Oil Systems	Pipelines	0 km	$0.00M
	Facilities	44	$5.19M
	Sub-total		**$5.19M**
Electrical Power	Facilities	41	$5,321.80M
	Sub-total		**$5,321.80M**
Communication	Facilities	94	$11.09M
	Sub-total		**$11.09M**
	Total		**$9,147.01M**

* 'M' in Replacement Value represents Millions

Inventory of Assets: Essential Facilities

Essential Facility Inventory

Essential facilities include hospitals, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

The following table provides the number of hospitals, emergency response facilities and schools that are in the county and their replacement value. The individual hospitals, schools and emergency response facilities are listed in Appendix A, B and C respectively of this report. The Figures 6, 7 and 8 on following pages provide maps for hospitals, emergency response facilities and schools respectively.

Table 5: Essential Facility Inventory

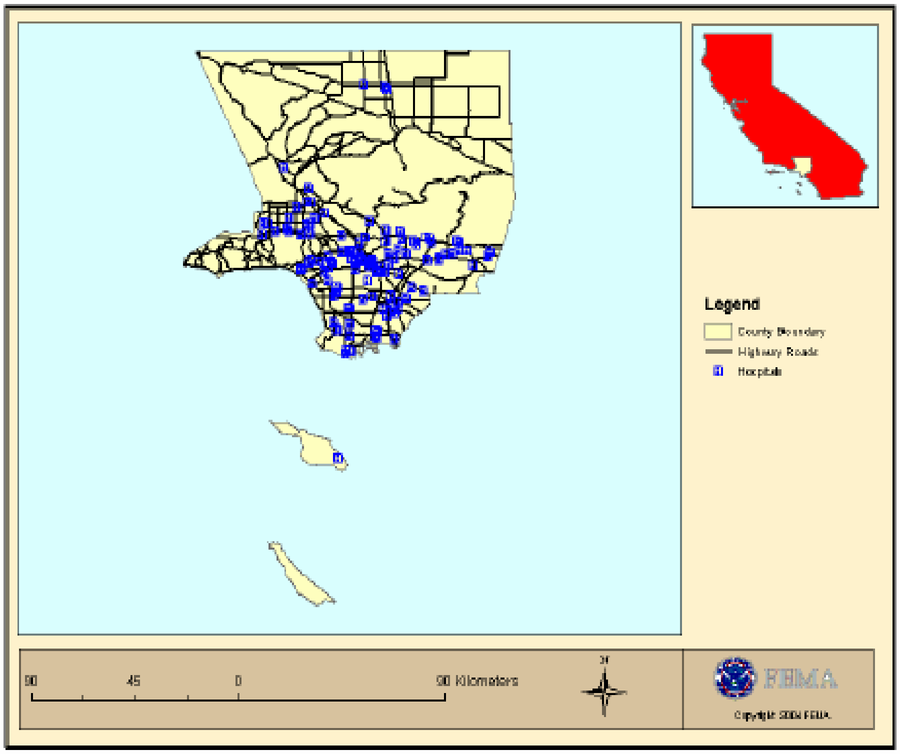
Building Type	Number of Buildings	Replacement Value *
Hospitals	120	$1,569M
Fire Stations	111	$79M
Police Stations	166	$274M
EOCs	12	$14M
Schools	3,022	$1,783M
Total	3,431	$3,719M

* Replacement Value does not include contents, which can be substantial for essential facilities. 'M' in Replacement Value represents Millions.

Inventory of Assets: Essential Facilities (continued)

Figure 6 provides a map of the hospitals in the county.

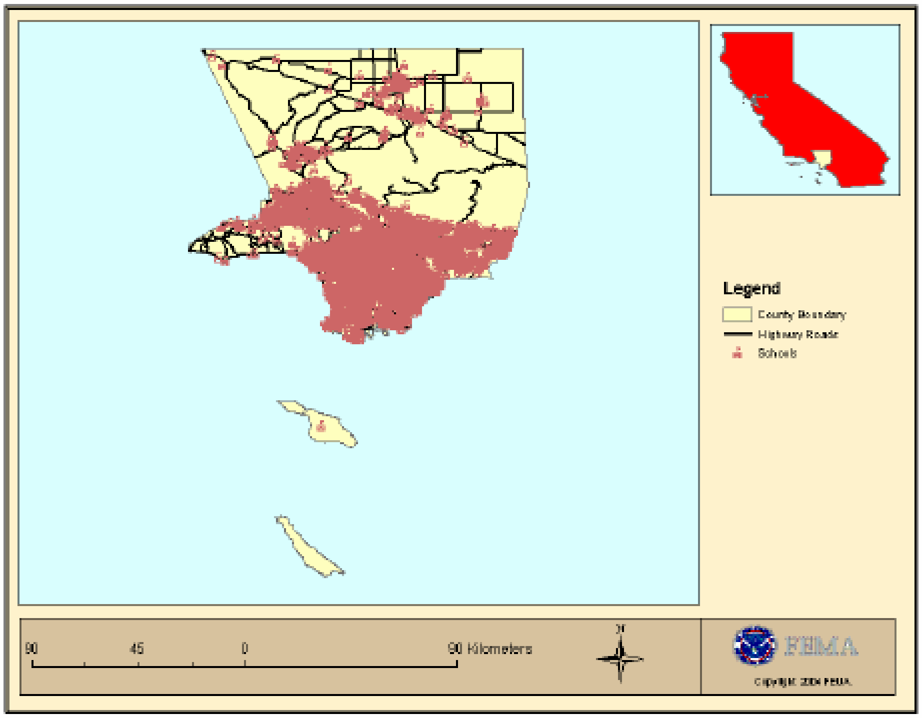
Figure 6: Hospitals Map
Los Angeles County, California



Inventory of Assets: Essential Facilities (continued)

Figure 8 provides a map of the schools the county.

Figure 8: Schools Map
Los Angeles County, California

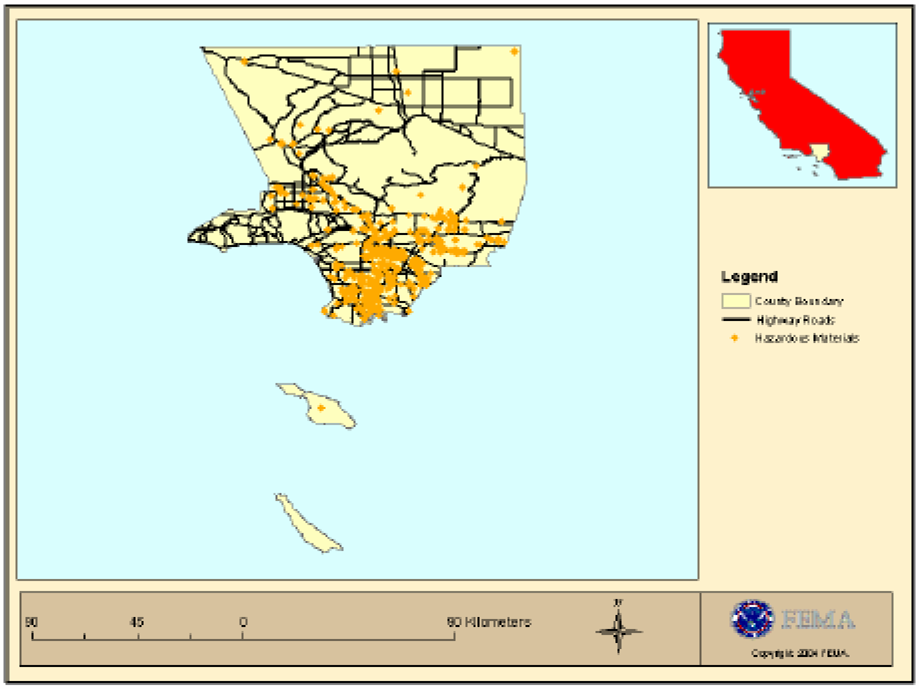


Inventory of Assets: Hazardous Materials Facilities

Hazardous Materials Facilities

Hazardous material sites are identified as High Potential Loss Facilities in HAZUS. In Los Angeles County, there are 1,735 hazardous materials sites. In HAZUS, a 'site' is defined for each facility / chemical combination, so there may be multiple entries for a single facility. Figure 10 provides a map of the sites in the county. The hazardous material sites shown in the map are also listed in Appendix D of this report.

Figure 10: Hazardous Material Sites Map
Los Angeles County, California



Loss Estimates: Buildings

Scenario Definition

Scenario Name:

LA County 100 year prob (6.5)

Building Damage

HAZUS estimates that about 411.34 thousand buildings will be at least moderately damaged. This is over 19% of the total number of buildings in the region. Table 10 below summarizes the expected damage by occupancy for the buildings in the region. Table 11 below summarizes the expected damage by building type.

Table 10: Building Damage by General Occupancy (in thousands of buildings)

Occupancy	None	Slight	Moderate	Extensive	Complete	Total
Residential	921.99	801.56	335.09	44.17	10.82	2,113.62
Commercial	11.51	9.77	11.26	4.87	1.20	38.61
Industrial	1.77	1.47	1.91	0.87	0.23	6.26
Agriculture	0.05	0.02	0.01	0.01	< 0.01	0.09
Religion	0.43	0.36	0.34	0.15	0.04	1.32
Government	0.20	0.17	0.19	0.09	0.02	0.67
Education	0.09	0.06	0.06	0.02	< 0.01	0.24
Total	936.04	813.41	348.86	50.17	12.31	2,160.79

Table 11: Building Damage by Building Type (in thousands of buildings)

Building Type	None	Slight	Moderate	Extensive	Complete	Total
Wood	900.80	782.23	302.23	23.40	6.42	2,015.10
Steel	4.28	3.85	6.19	3.11	0.69	18.12
Concrete	8.10	7.55	7.96	3.74	0.80	28.15
Masonry	18.07	10.15	12.07	5.32	1.03	46.65
Mobile Home	4.78	9.62	20.41	14.59	3.36	52.77
Total	936.04	813.41	348.86	50.17	12.31	2,160.79

Loss Estimates: Buildings (continued)

Economic Loss to Buildings

The total building-related losses were $47,452.90M (2003 dollars); 25% of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 60% of the total loss. Table 12 below provides a summary of the losses associated with the building damage by occupancy. Table 13 below provides a summary of the losses associated with the building damage by building type.

Table 12: Economic Loss by General Occupancy

Occupancy	Structural Damage	Nonstructural Damage	Content Loss	Business Interruption	Total
Residential	$3,353.54M	$18,134.15M	$5,049.49M	$1,576.29M	$28,113.46M
Commercial	$2,089.23M	$5,820.19M	$2,641.16M	$4,846.15M	$15,396.72M
Industrial	$406.45M	$1,292.51M	$869.34M	$349.31M	$2,917.61M
Agriculture	$16.91M	$14.00M	$10.82M	$2.86M	$44.58M
Religion	$83.04M	$259.45M	$114.27M	$36.35M	$493.10M
Government	$16.94M	$58.05M	$25.38M	$24.84M	$125.21M
Education	$40.05M	$196.76M	$97.23M	$28.18M	$362.23M
Total	**$6,006.15M**	**$25,775.11M**	**$8,807.69M**	**$6,863.97M**	**$47,452.91M**

Table 13: Economic Loss by General Building Type

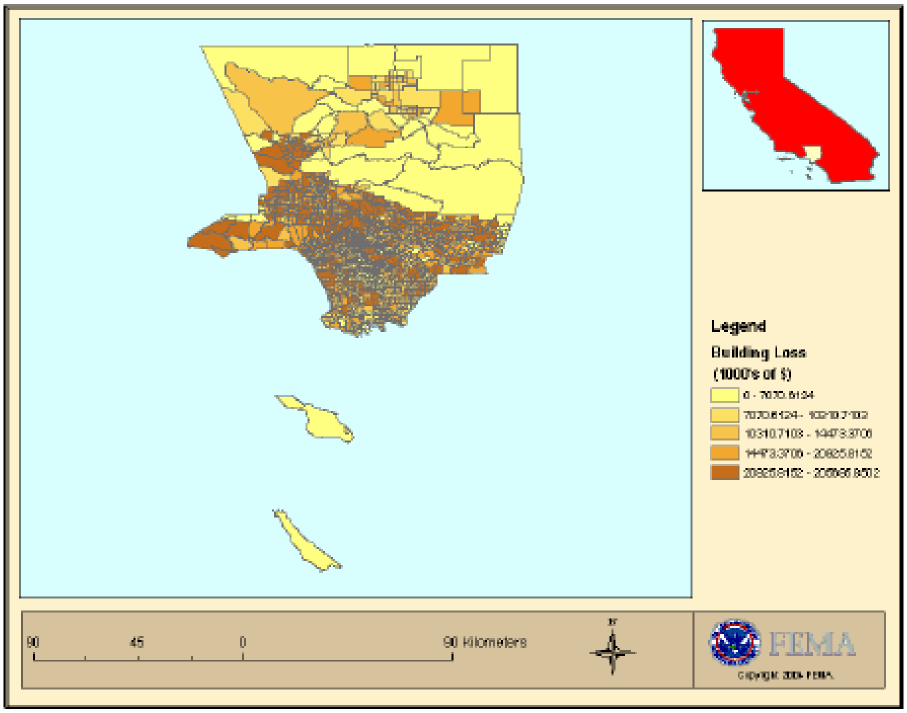
Building Type	Structural Damage	Nonstructural Damage	Content Loss	Business Interruption	Total
Wood	$2,889.51M	$16,329.90M	$5,084.32M	$1,542.81M	$25,846.54M
Steel	$747.87M	$2,327.13M	$892.82M	$1,594.90M	$5,562.72M
Concrete	$1,315.19M	$3,772.70M	$1,561.20M	$1,826.52M	$8,475.60M
Masonary	$967.16M	$3,100.64M	$1,231.73M	$1,889.42M	$7,188.96M
Mobile Home	$86.42M	$244.73M	$37.62M	$10.32M	$379.09M
Total	**$6,006.15M**	**$25,775.11M**	**$8,807.69M**	**$6,863.97M**	**$47,452.91M**

* 'M' in all the values above represents Millions

Loss Estimates: Buildings (continued)

Figure 12 provides a thematic map of building (structural damage + nonstructural damage) loss in the county.

Figure 12: Building Loss Map
Los Angeles County, California



Loss Estimates: Lifelines Infrastructure

Economic Loss to Lifelines

For the transportation and utility lifeline systems, HAZUS computes the direct repair cost for each component. There are no losses computed by HAZUS for business interruption due to lifeline outages. Tables 14 & 15 provide a breakdown in the expected lifeline losses.

Table 14: Transportation System Lifeline Losses

System	Component	Replacement Value *	Economic Loss *	Loss Ratio (%)
Highway	Roadways	$11,300.54M	$0.00M	0.00
	Bridges	$10,914.99M	$575.40M	5.27
	Tunnels	$34.27M	$0.99M	2.89
	Sub-total	**$22,249.80M**	**$576.39M**	
Railway	Tracks	$869.59M	$0.00M	0.00
	Bridges	$28.36M	$0.77M	2.71
	Tunnels	$0.00M	$0.00M	0.00
	Facilities	$216.08M	$47.26M	21.87
	Sub-total	**$1,114.03M**	**$48.02M**	
Light Rail	Tracks	$128.53M	$0.00M	0.00
	Bridges	$6.17M	$0.17M	2.76
	Tunnels	$0.00M	$0.00M	0.00
	Facilities	$0.00M	$0.00M	0.00
	Sub-total	**$134.70M**	**$0.17M**	
Bus	Facilities	$54.02M	$13.57M	25.12
	Sub-total	**$54.02M**	**$13.57M**	
Ferry	Facilities	$0.00M	$0.00M	0.00
	Sub-total	**$0.00M**	**$0.00M**	
Port	Facilities	$398.72M	$78.66M	19.73
	Sub-total	**$398.72M**	**$78.66M**	
Airport	Facilities	$154.34M	$34.64M	22.44
	Runways	$1,393.63M	$0.00M	0.00
	Sub-total	**$1,547.97M**	**$34.64M**	
	Total	**$25,499.25M**	**$751.45M**	

* 'M' in Replacement Value and Economic Loss represents Millions

Loss Estimates: Lifelines Infrastructure (continued)

Table 15: Utility System Lifeline Losses

System	Component	Replacement Value *	Economic Loss *	Loss Ratio (%)
Potable Water	Pipelines	$0.00M	$0.00M	0.00
	Facilities	$589.41M	$103.19M	17.51
	Distribution Lines	$862.53M	$161.46M	18.72
	Sub-total	**$1,451.94M**	**$264.65M**	
Waste Water	Pipelines	$0.00M	$0.00M	0.00
	Facilities	$1,493.17M	$215.40M	14.43
	Distribution Lines	$517.52M	$127.70M	24.68
	Sub-total	**$2,010.69M**	**$343.10M**	
Natural Gas	Pipelines	$0.00M	$0.00M	0.00
	Facilities	$1.29M	$0.00M	0.00
	Distribution Lines	$345.01M	$136.51M	39.57
	Sub-total	**$346.30M**	**$136.51M**	
Oil Systems	Pipelines	$0.00M	$0.00M	0.00
	Facilities	$5.19M	$0.73M	13.98
	Sub-total	**$5.19M**	**$0.73M**	
Electrical Power	Facilities	$5,321.80M	$837.78M	15.74
	Sub-total	**$5,321.80M**	**$837.78M**	
Communication	Facilities	$11.09M	$1.88M	16.99
	Sub-total	**$11.09M**	**$1.88M**	
	Total	**$9,147.01M**	**$1,584.65M**	

* 'M' in Replacement Value and Economic Loss represents Millions

Loss Estimates: Essential Facilities

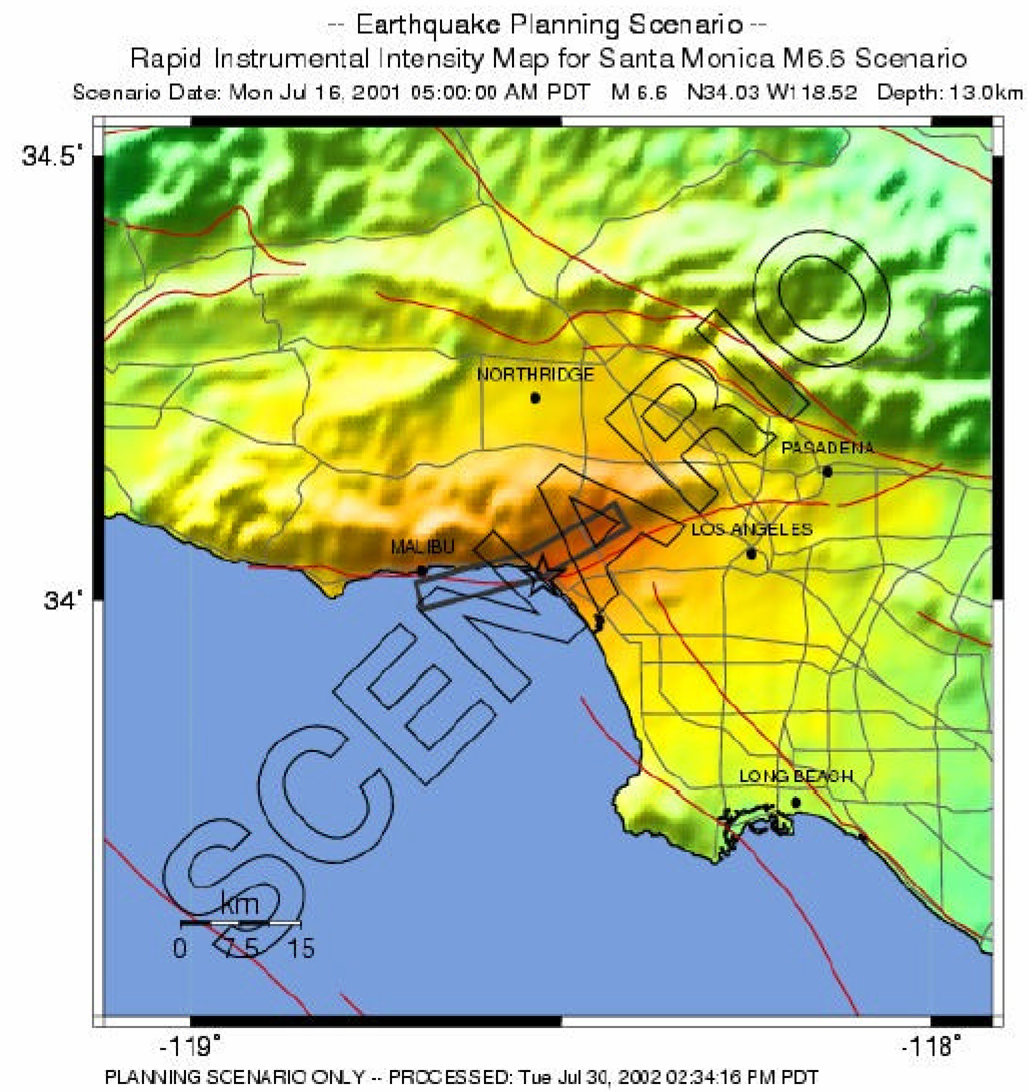
Essential Facility Damage

Of the 3,431 essential facilities in the county, HAZUS estimates that 609 facilities may be at least moderately damaged. This is over 18% of the total number in the region. Table 16 summarizes the expected damage for the essential facilities in the region.

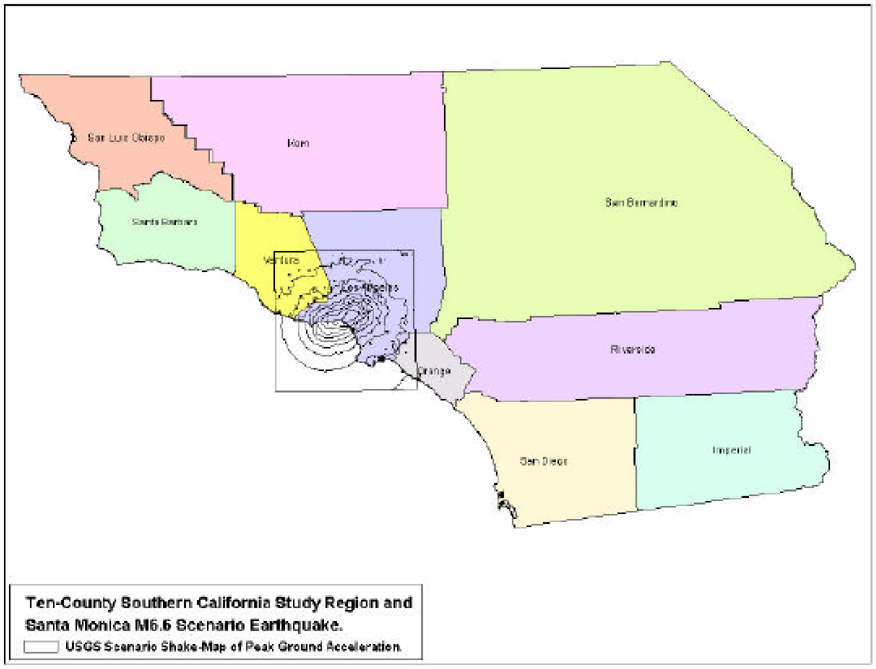
Table 16: Building Damage for Essential Facilities (number of buildings)

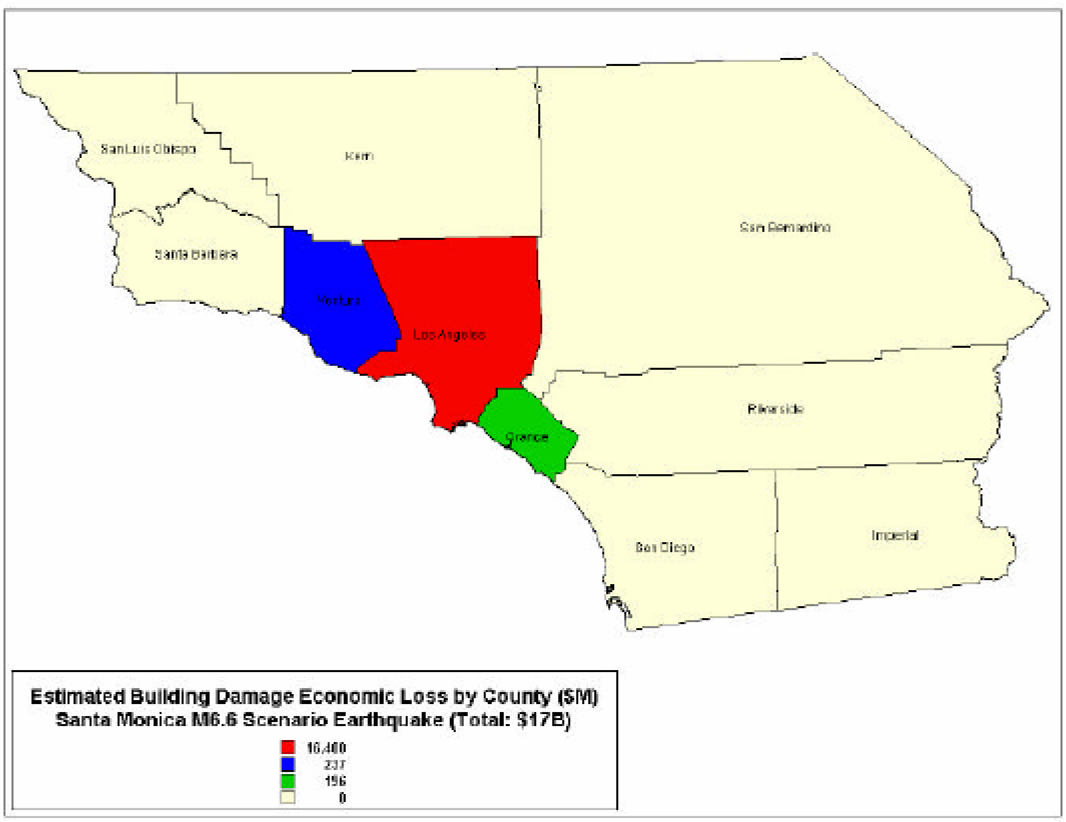
Classification	None	Slight	Moderate	Extensive	Complete	Total
Hospitals	54.21	49.87	14.93	0.95	0.02	120
Fire Stations	50.43	48.36	11.62	0.48	0.08	111
Police Stations	78.21	70.65	16.32	0.66	0.12	166
EOCs	5.63	5.13	1.18	0.05	0.01	12
Schools	1,629.78	829.03	496.19	60.27	5.97	3,021
Total	**1,818.26**	**1,003.04**	**540.24**	**62.41**	**6.20**	**3430**

Graphic Depictions of Specific Fault Scenarios (HAZUS)



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

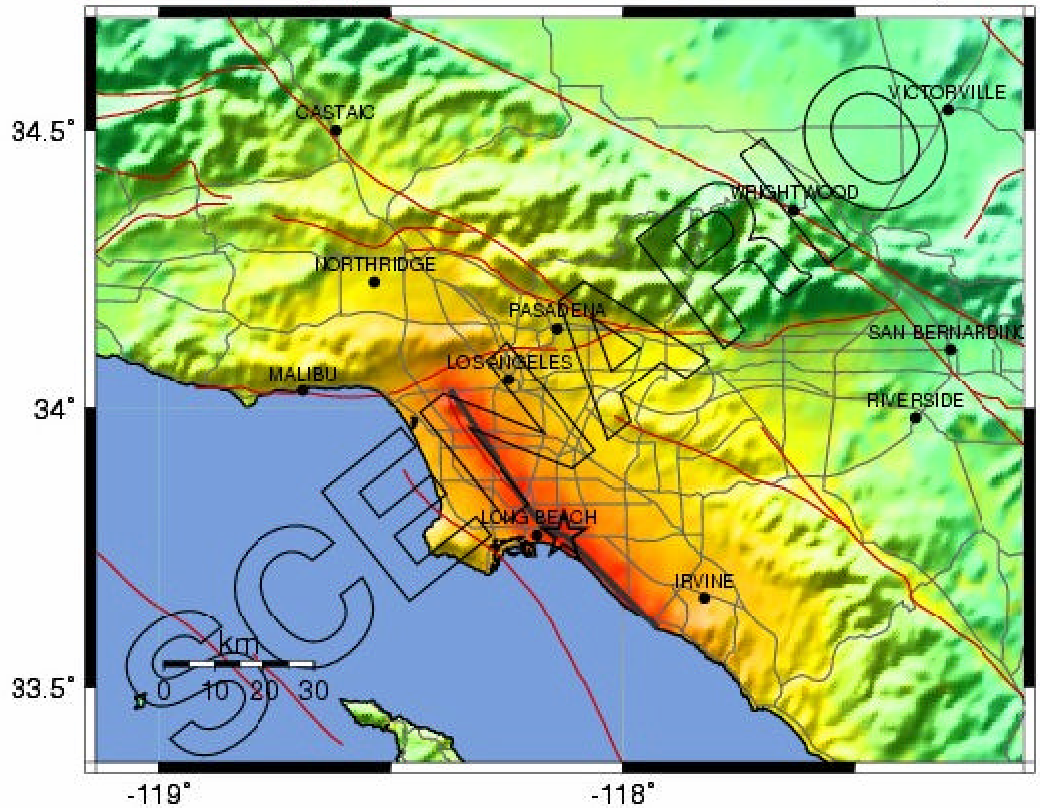

San Luis Obispo
Kern
San Bernardino
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Ten-County Southern California Study Region and
Santa Monica M6.6 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.


San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Santa Monica M6.6 Scenario Earthquake (Total: $17B)
16,400
237
156
0

-- Earthquake Planning Scenario --

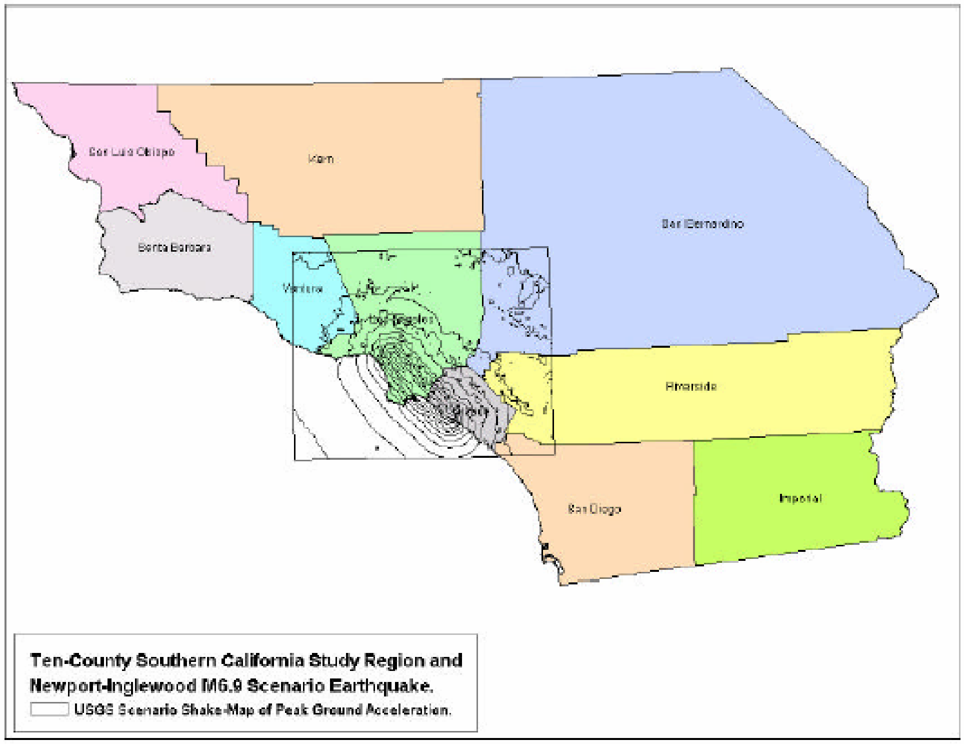
Rapid Instrumental Intensity Map for Newport-Inglewood M6.9 Scerario

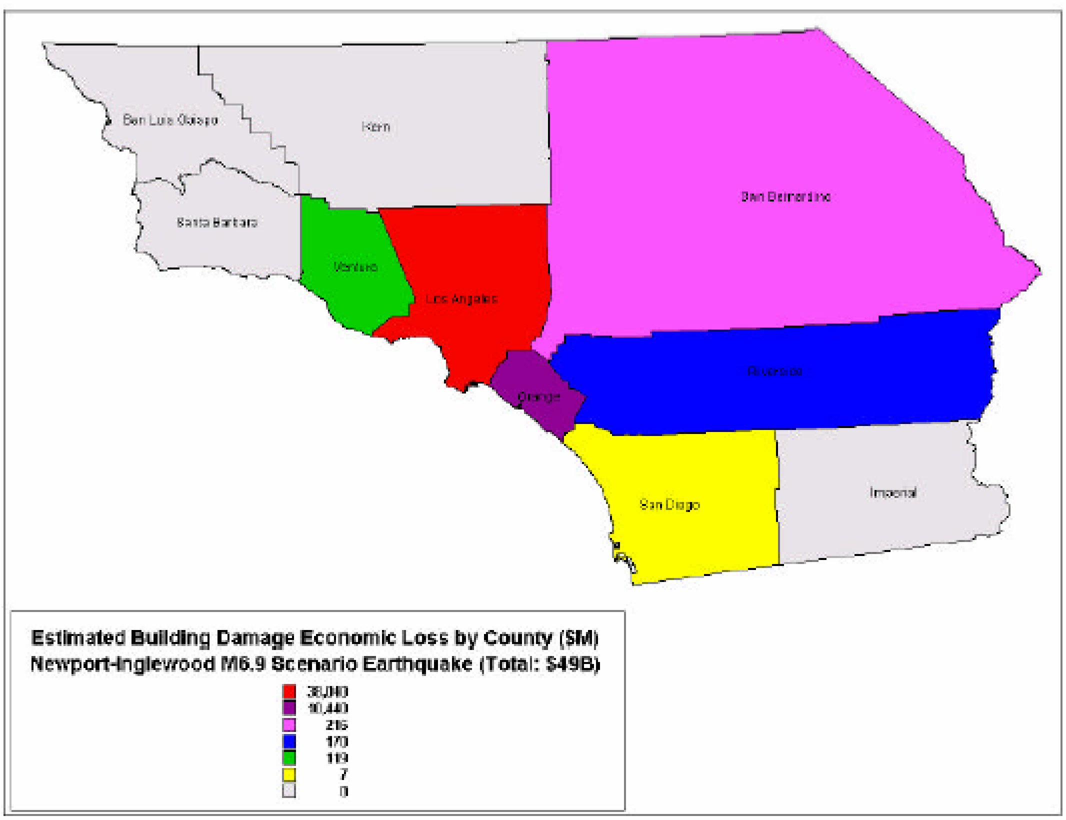
Scenario Date: Fri Aug 3, 2001 05:00:00 AM PDT M 6.9 N33.78 W118.13 Depth: 6.0km

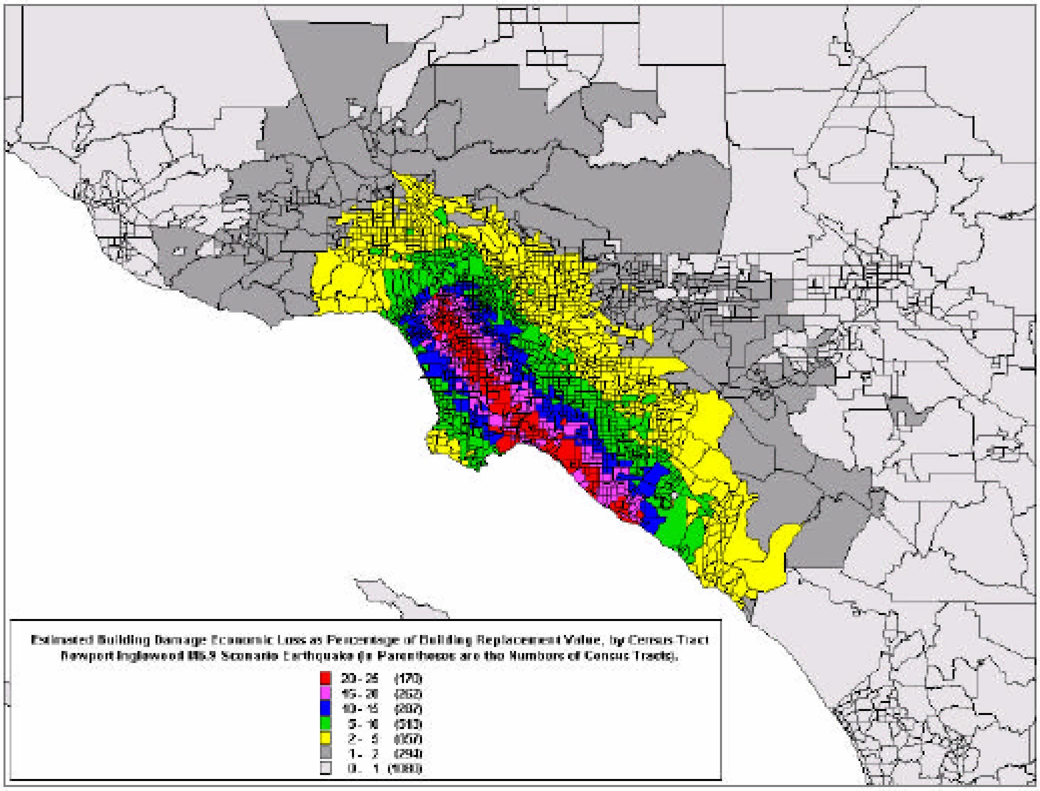


PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:01:27 PM PDT

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


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

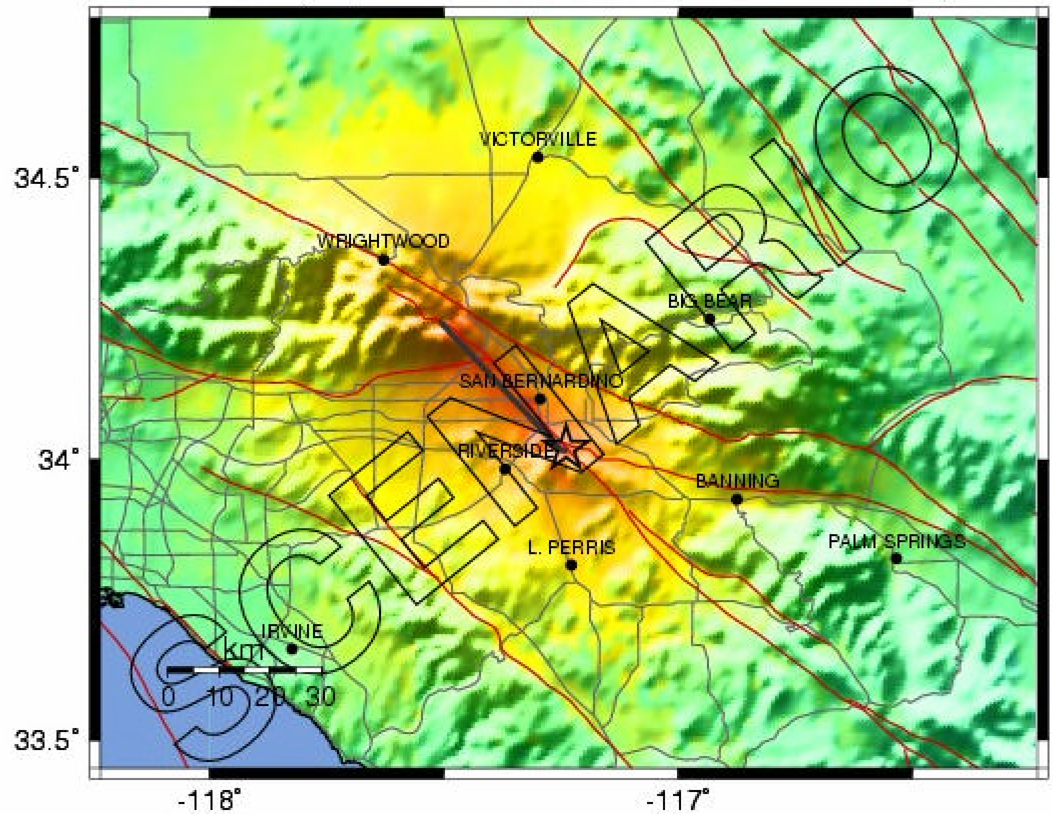

San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Newport-Inglewood M6.9 Scenario Earthquake (Total: $49B)
38,040
10,440
216
170
119
7
0


Estimated Building Damage Economic Loss as Percentage of Building Replacement Value, by Census Tract
Newport Inglewood M6.9 Scenario Earthquake (in Parentheses are the Numbers of Census Tracts).
20 - 25 (170)
15 - 20 (262)
10 - 15 (287)
5 - 10 (513)
2 - 5 (857)
1 - 2 (294)
0 - 1 (1080)

-- Earthquake Planning Scenario --

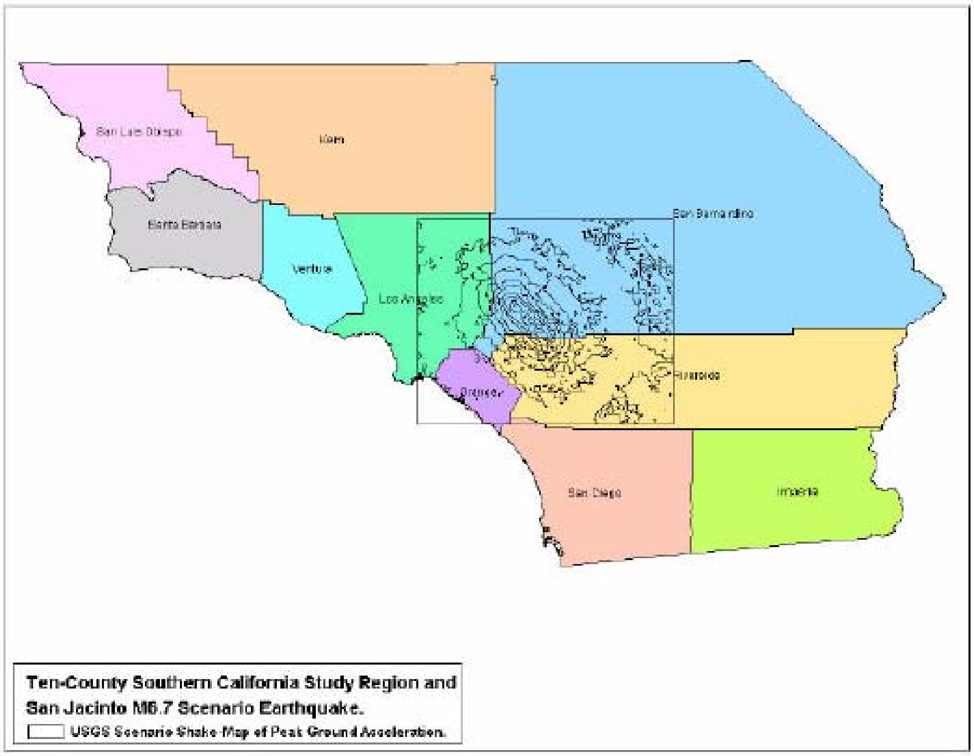
Rapid Instrumental Intensity Map for San Jacinto M6.7 Scenario

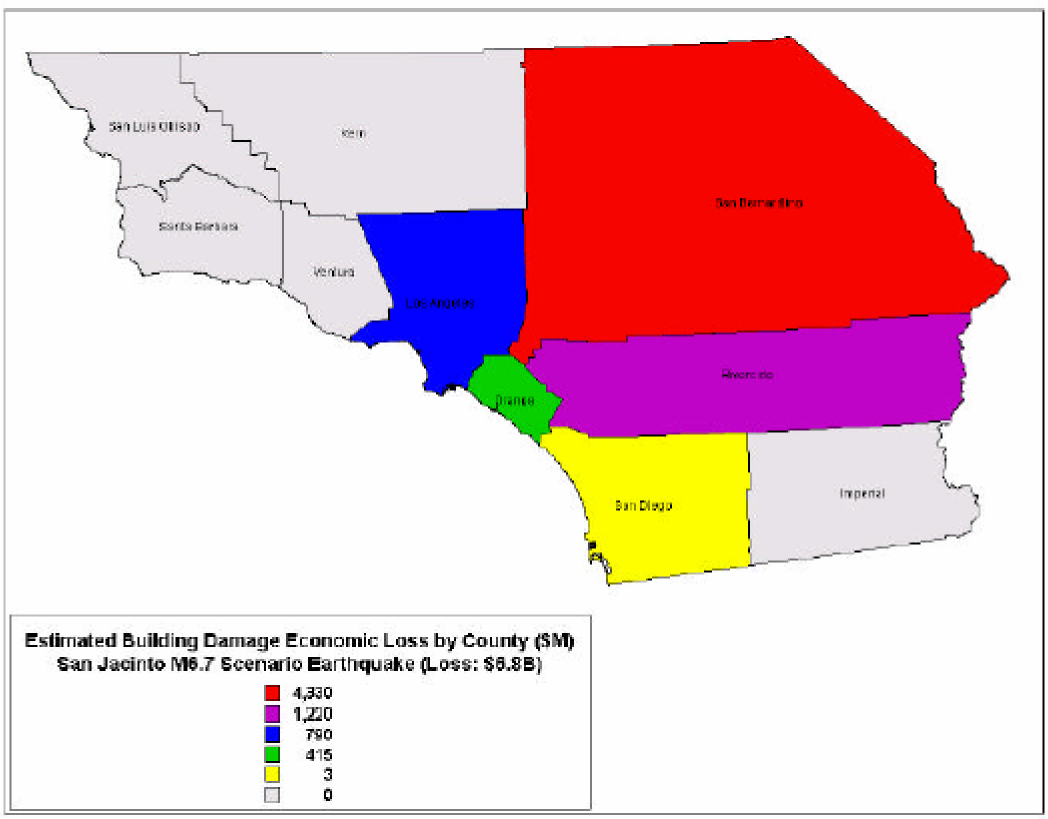
Scenario Date: Fri Sep 14, 2001 07:00:00 AM PDT M 6.7 N34.02 W117.24 Depth: 10.0km

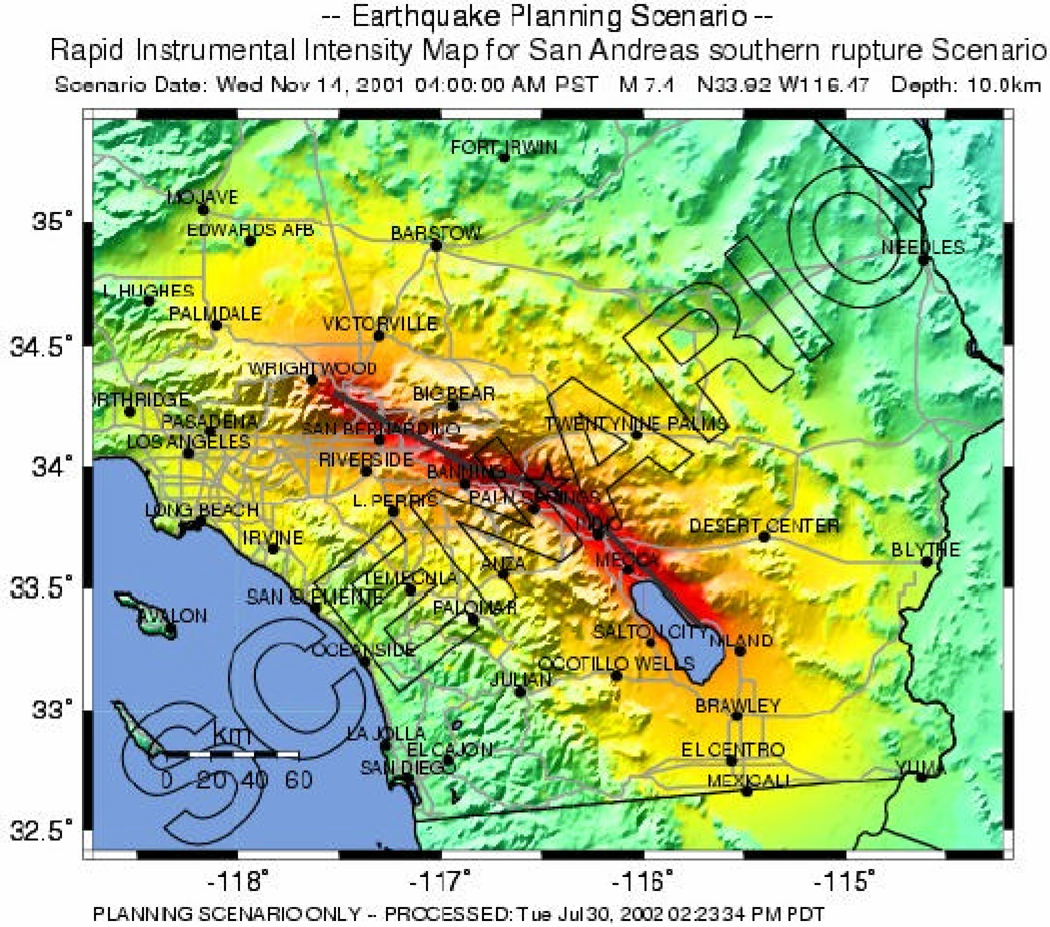


PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:29:03 PM PDT

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


San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
Ten-County Southern California Study Region and
San Jacinto M6.7 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.


San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
San Jacinto M6.7 Scenario Earthquake (Loss: $6.8B)
4,330
1,220
790
415
3
0



PERCEIVED SHAKING	Not felt	Weak	Light	Moderate	Strong	Very strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	none	none	none	Very light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
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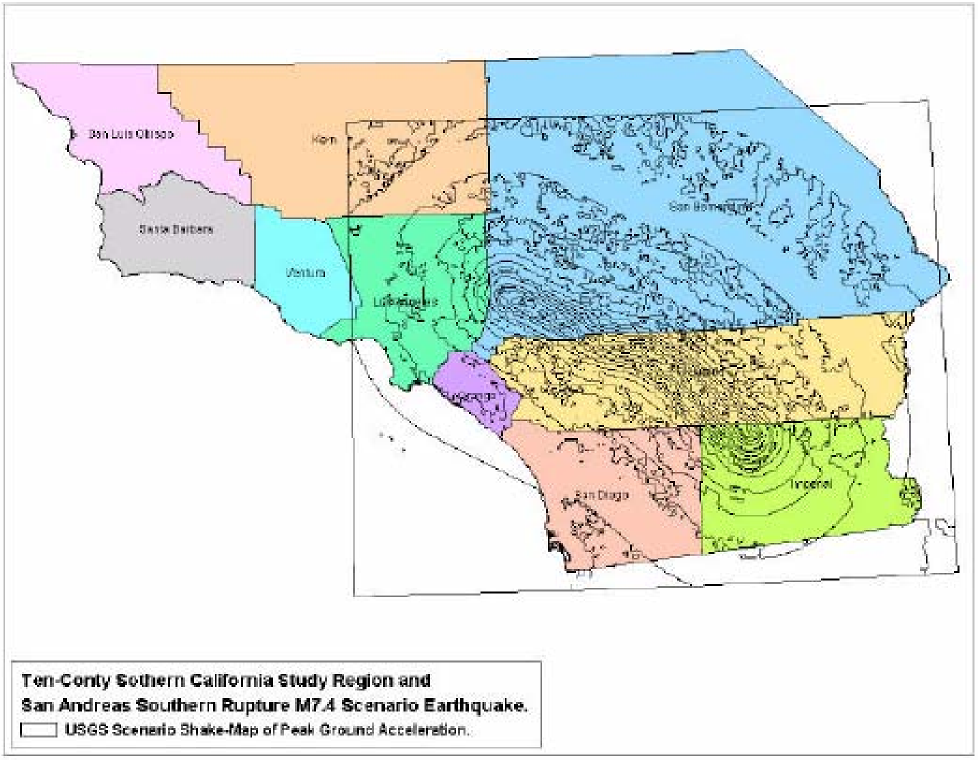
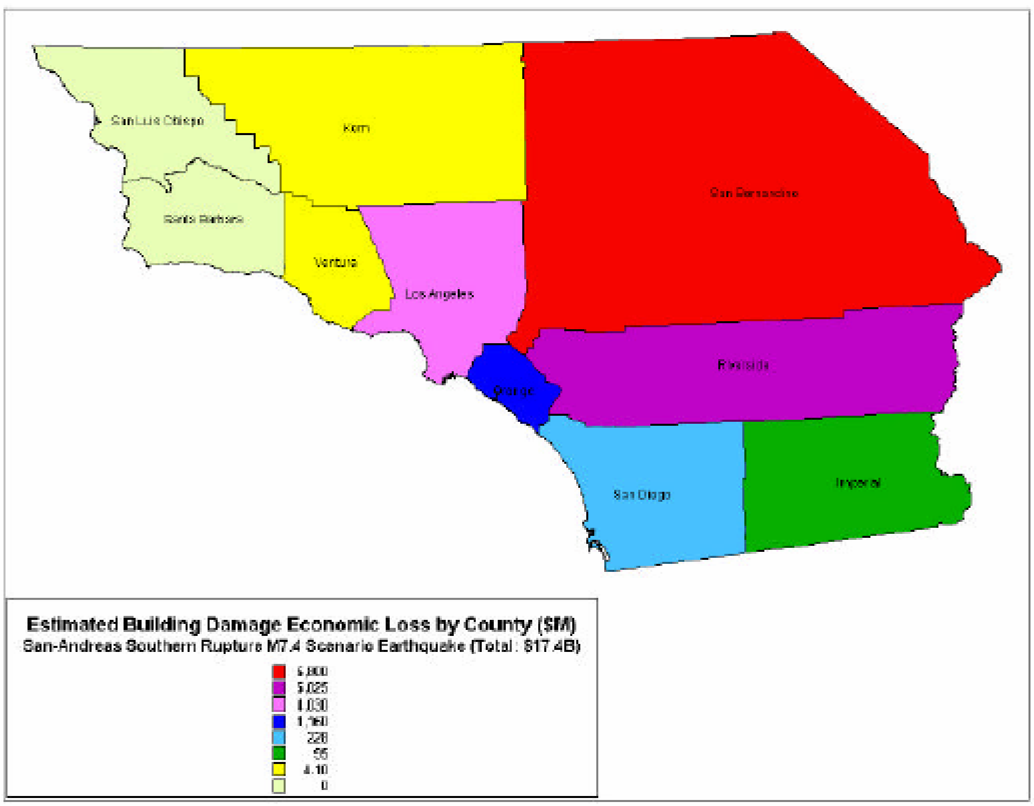
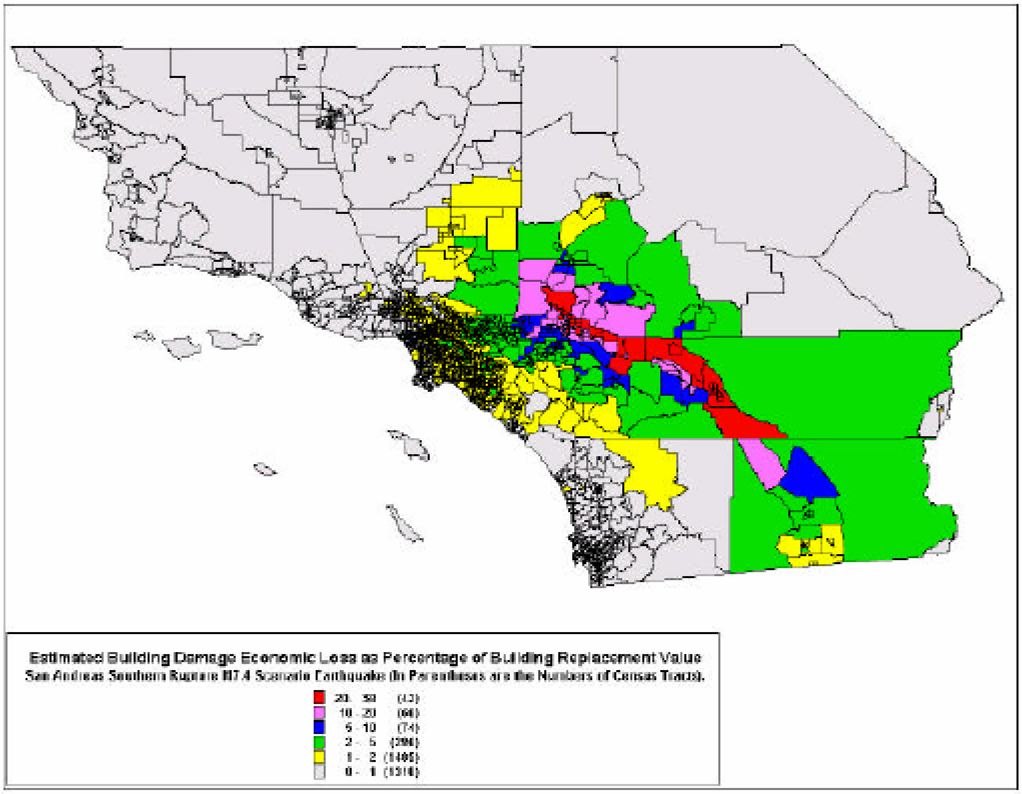
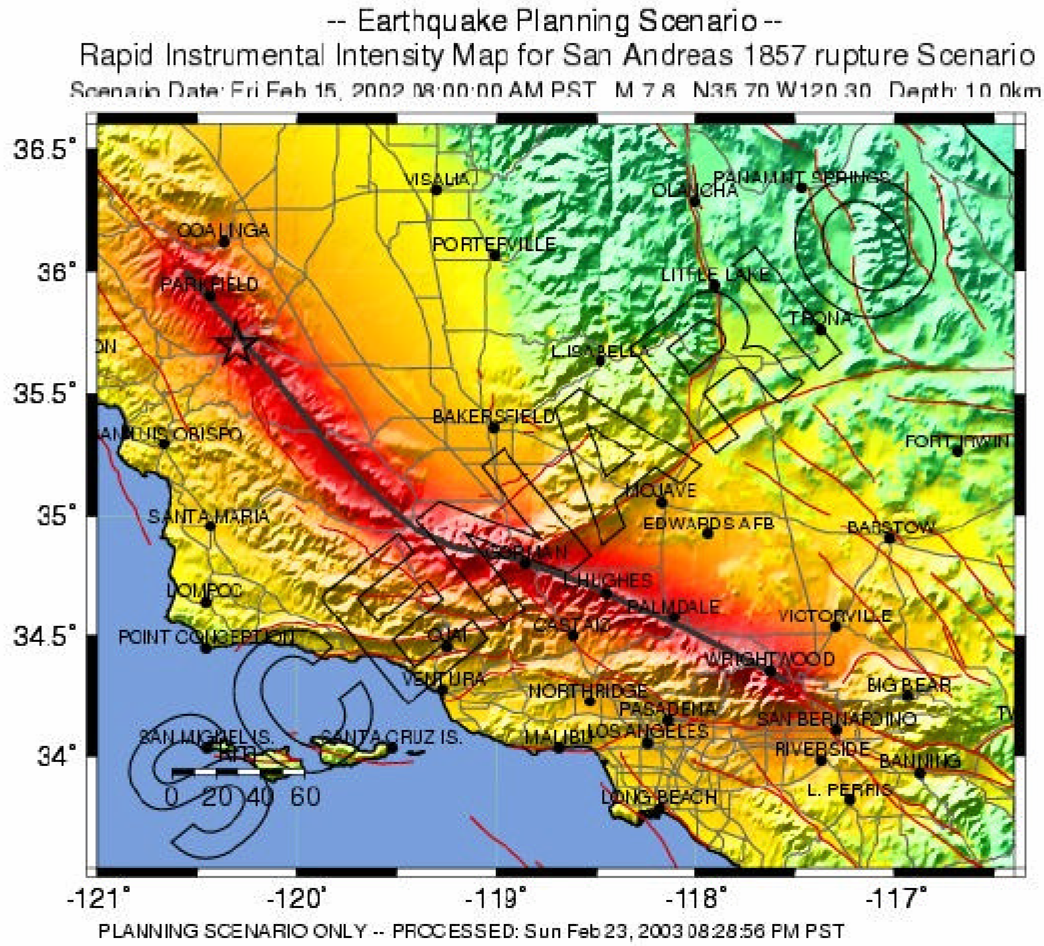
INSTRUMENTAL INTENSITY	I	II-III	IV	V	VI	VII	VIII	IX	X+

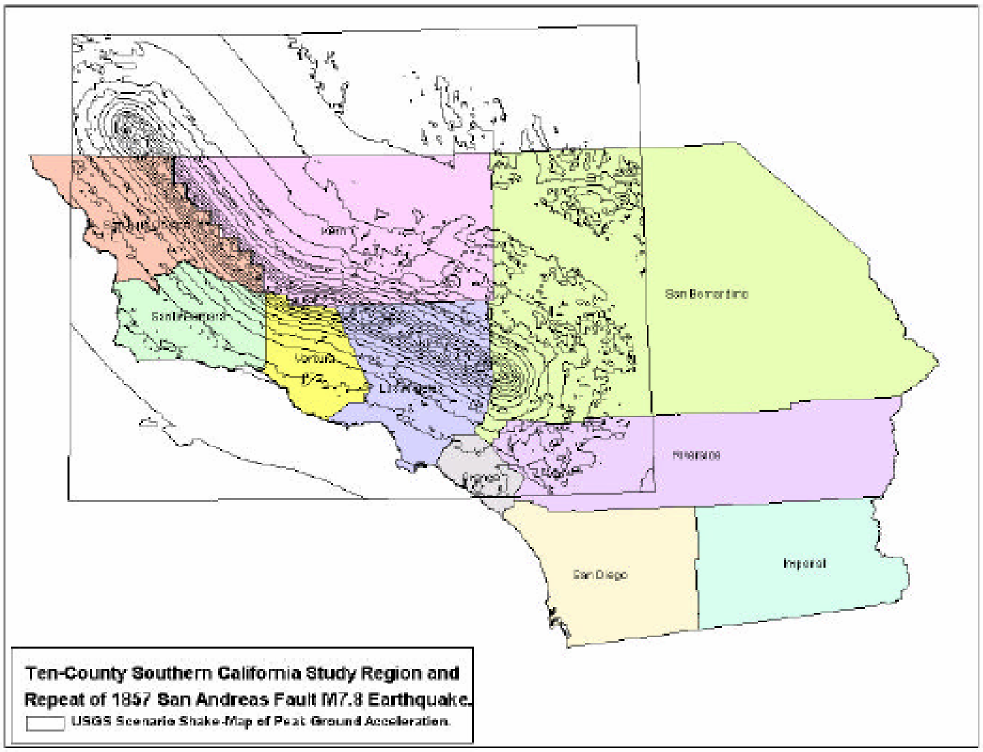

San Luis Obispo
Kern
Santa Barbara
Ventura
Los Angeles
San Bernardino
San Diego
Imperial
Ten-Conty Sothern California Study Region and
San Andreas Southern Rupture M7.4 Scenario Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.

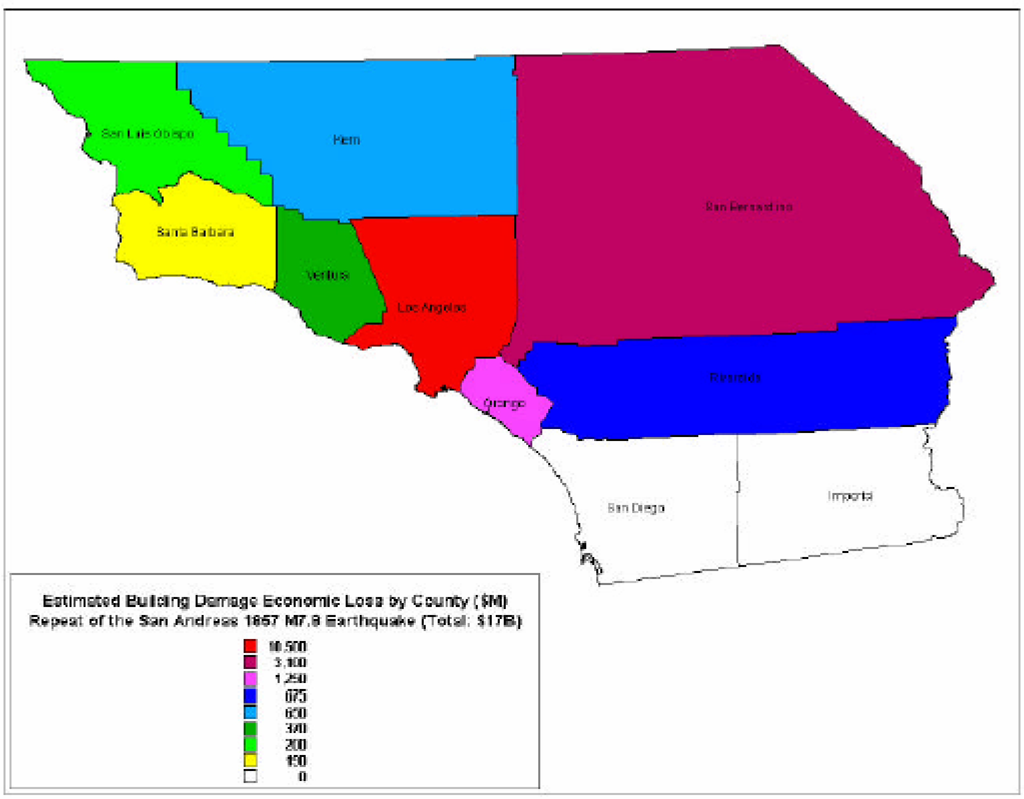

San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
San-Andreas Southern Rupture M7.4 Scenario Earthquake (Total : $17.4B)
5,025
1,160
228
55
4.10
0


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



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

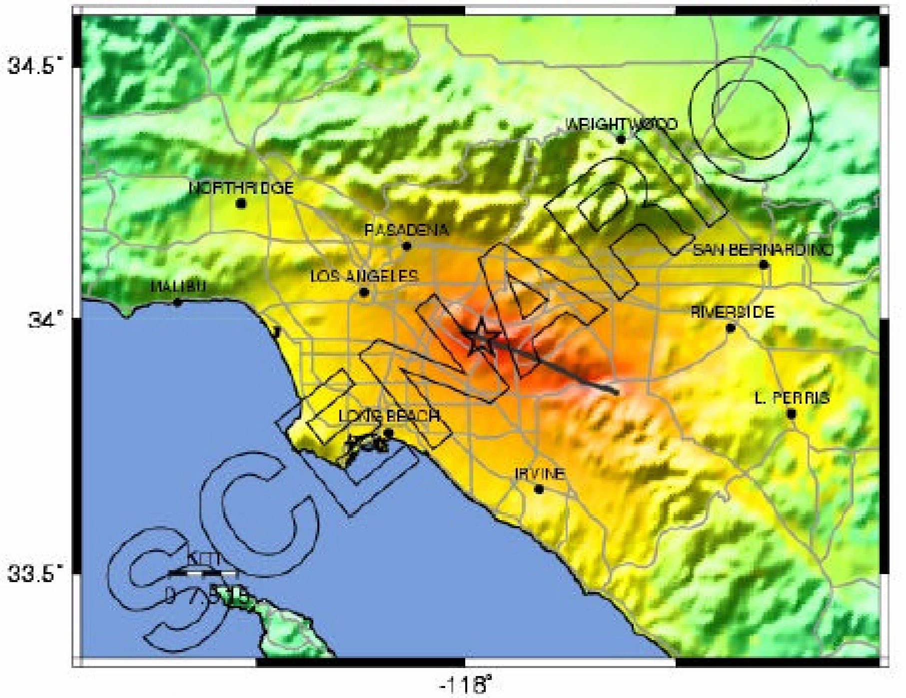

Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Ten-County Southern California Study Region and
Repeat of 1857 San Andreas Fault M7.8 Earthquake.
USGS Scenario Shake-Map of Peak Ground Acceleration.


San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
Estimated Building Damage Economic Loss by County ($M)
Repeat of the San Andreas 1857 M7.8 Earthquake (Total: $17B)
10,500
3,100
1,250
675
650
340
200
190
0

-- Earthquake Planning Scenario --

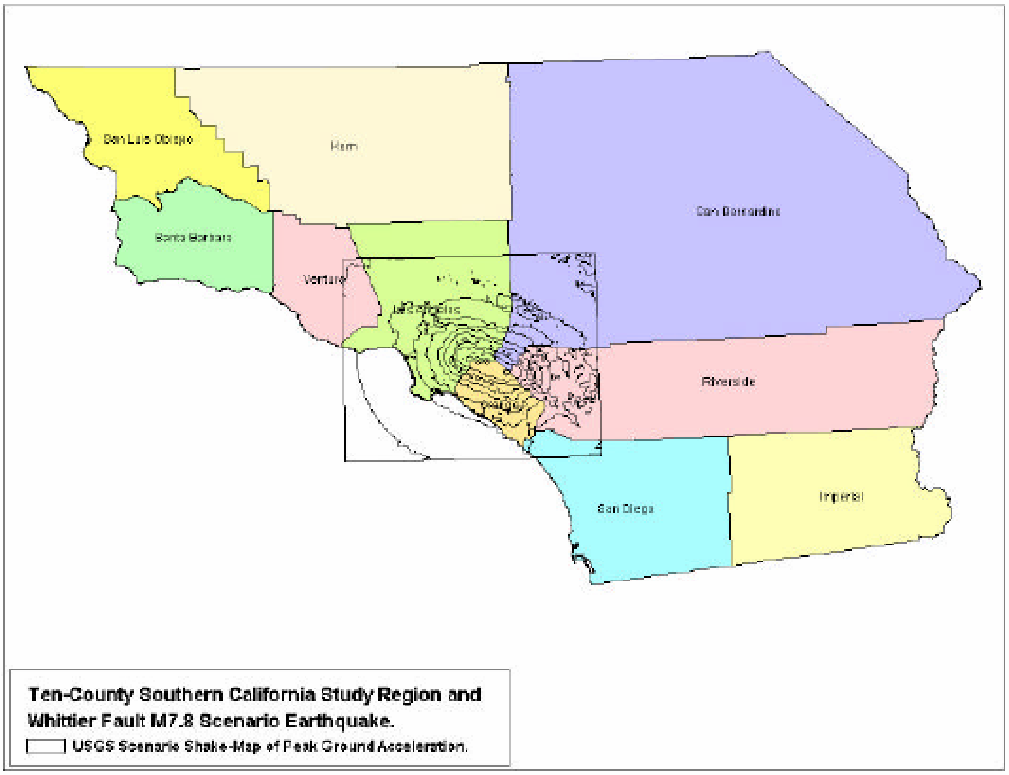
Rapid Instrumental Intensity Map for Whittier M6.8 Fault Scenario

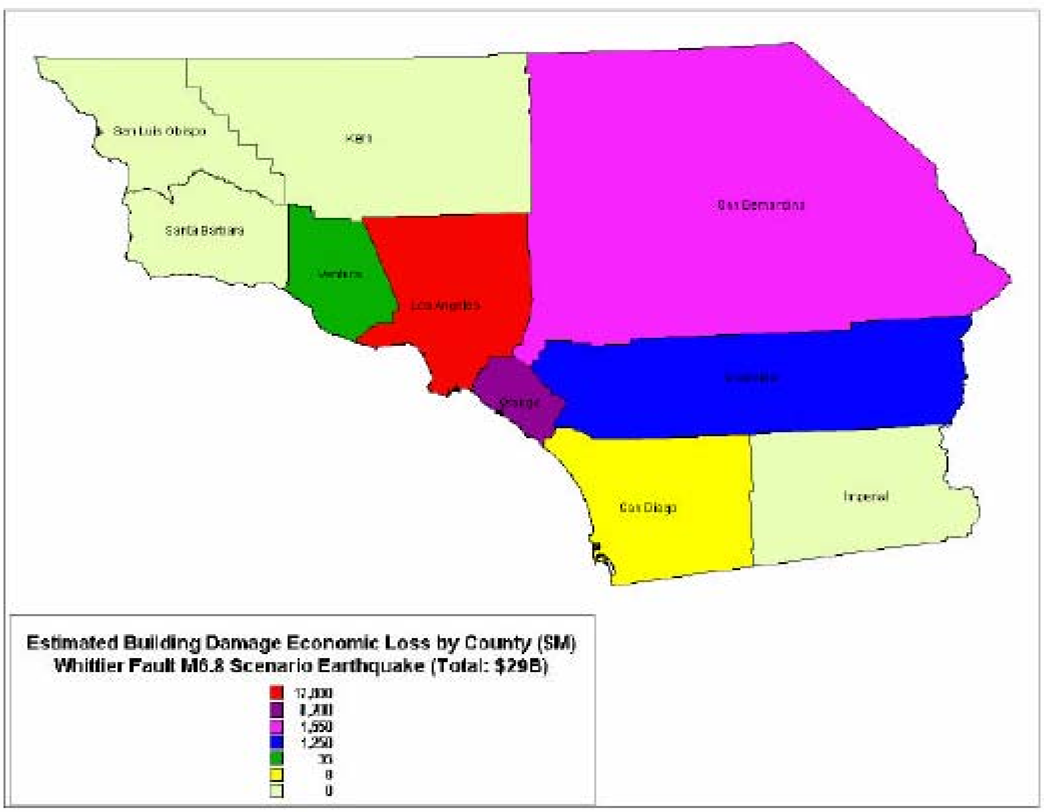
Scenario Date: Mon Mar 11, 2002 04:00:00 AM PST M 6.8 N33.96 W117.96 Depth: 10.0km



PLANNING SCENARIO ONLY -- PROCESSED: Tue Jul 30, 2002 02:45:43 PM PDT

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


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


San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Orange
Imperial
Estimated Building Damage Economic Loss by County ($M)
Whittier Fault M6.8 Scenario Earthquake (Total: $29B)
17,000
1,550
1,250
35
0
0

Wildland Urban Interface Fire

Wildland Urban Interface Fire was rated a HIGH PRIORITY HAZARD in SMMUSD & SMC.

Impact

SMMUSD

The schools located in the City of Malibu are vulnerable to Wildland Urban Interface Fires. The land surrounding the schools is located near state and local parks. The potential danger varies from minor to high risk depending on the local and fuel.

SMC

The impact is minor to the college. Their location in the City of Santa Monica reduces their risk. The danger to their six repeater sites can impact their data/telecommunication capabilities.

Levels of Wildland Fire Protection Services

The history of California wildfires indicates that the following trends will continue. Risk from wildfire to life, property, natural resources, and firefighter safety is increasing.

- Population will grow and more people will live and use wildland areas, especially in the Central Sierra and in the Southern California counties of Riverside, San Bernardino and San Diego.
- Topography and climate support ecosystems where large wildfires can be expected.
- Drought and fuel moisture conditions will be unpredictable but almost always dangerous in fire season.
- More structures will be constructed in areas that are very susceptible to wildfire.
- Historical legacy of narrow roads, difficult entrance, insufficient water supplies, flammable building construction and location that make many communities and homes wildfire-prone still exits.
- Public demand for wildland fire protection and other services will increase.
- Deteriorating forest health, increasing fuel loads and other factors have led to more intense, destructive wildfires; unabated this pattern will continue.

Assets at risk will increase, especially watershed assets, because of the rapid rise in the demand for water to supply more people. Based on population projections, the potential for accelerating loss of protected assets, especially life and property, will be greater from disastrous wildfires.

Large wildfires do not respect political or property boundaries. Historically, a strength of California's firefighting agencies is found within a concept of mutual cooperation at the federal, state, and local levels of government. Day-to-day mutual aid for initial attack, as well as a statewide mutual-aid system for fire disasters, is the basis of this cooperation and coordination. The ability to rapidly mobilize, effectively deploy and support large numbers of specialized firefighting resources is essential to cope with large multiple fires. Hence, CDF, in cooperation with other fire agencies, must maintain infrastructure, including communications and capital improvements necessary to facilitate such a response.

Fire protection forces in California must have sufficient depth to respond to large, multiple wildfires and still prevent other small fires from becoming large damaging fires. CDF plays a key role in supplying and coordinating such forces; it should maintain and enhance this ability. The 1985 Fire Plan includes a model to provide adequate depth of resources that show CDF needing 96 additional engines and 825 personnel for managing large fires using the Incident Command System. There is a greater need today as reflected in the California Fire Plan.

California Fire Plan 2003

Wildland Fire Protection Fiscal Issues

Multi-year fiscal problems are occurring at all governmental levels, constraining the availability of funding to address the increasing workload, costs and losses of the California wildland fire protection system.

The increasing number of structures and people in California wild lands and the growing importance of the state's natural resources create a growing demand to fund additional wildland fire protection services for both the structures and the wildland resource assets.

The primary fiscal responsibilities for the initial attack responsibilities: (1) for federal wildland fire protection are the federal taxpayers, (2) for privately owned wildland fire protection are the state taxpayers, and (3) for structure fire protection in wildland areas are the local taxpayers. However, during the annual fire season, the state and federal taxpayers provide a minimum level of structural fire protection that is incidental to their primary missions of wildland fire protection. Similarly, in most wildland areas, local taxpayers provide year-round wildland fire protection on both state and federal responsibility areas that is incidental to the local government primary mission of structural fire protection.

Over the last decade, part of the increased costs for additional initial attack wildland resource protection and structural protection have been funded by local taxpayers through property taxes, fire district fees and volunteer firefighters. However, when a wildland fire overwhelms local resources and reaches a major fire status, both the state and the federal taxpayers pay for the costs of wildfires, structure protection, and the resulting disaster relief.

For the local taxpayers, the following continue to increase: (1) the structural values and number of people being protected on wild lands, (2) the costs of wildland and structure initial attack fire suppression funded at the local levels, and (3) the losses from the extended attack and larger fires.

For state and federal taxpayers, the following will continue to increase: (1) extended and large fire emergency fund expenditures for wildland fires, (2) protecting structures during initial attack and extended attack fires, and (3) state and federal agency disaster expenditures for damages to wildland resources and structures.

Health and Safety Code Section 13009 allows for recovery of fire suppression costs which, when obtained, be placed back into the state's general fund rather than invested in a pre-fire management program.

There is a direct relationship between reduced expenditures for pre-fire management and suppression and increased emergency fund expenditures, disaster funding, and private taxpayer's expenditures and losses. Reduction of pre-fire management or suppression resources allows more fires to become major disastrous fires. Major fires create additional suppression and disaster relief costs at all levels of government and increase citizen and business losses.

According to representatives of the insurance industry that insures structures in California wildland areas, (1) the insurer average costs and losses are about $1.09 for each $1.00 received in premiums, and (2) the urban dwellers are subsidizing the wildland homeowner through service-wide rating schedules.

Fire-Safe and Land Use Planning

Population increases in wildland areas have raised strategic concerns about wildfire protection. Clearance laws, zoning, and related fire safety requirements implemented by state and local authorities need to address these factors:

Fire-resistant construction standards: We can no longer view a wildland fire as affecting only watershed, wildlife and vegetation resources; we must now consider their effect on people and their structures. Further, this increase in people and structures have provided increasing ignition sources for fire, which, due to their proximity, can spread into the wildland. Building construction standards that encompass such items as roof covering, opening protection and fire resistance are designed to both protect the structure from external fires and to contain internal fires for longer periods.

Hazard reduction near structures (defensible space): The public image of defensible space as part of pre-fire management should be expanded to include such immediate benefits as improved aesthetics, increased health of large remaining trees and other valued plants, and enhanced wildlife habitat. The use of defensible space that provides landscape naturalness, along with its compatibility with wildlife, water conservation and forest health, should be emphasized.

Infrastructure: Effective fire protection in the intermix cannot be accomplished solely through the acquisition of equipment, personnel and training. The area's infrastructure also must be considered during the formulation of development plans. Specific fire hazard areas should be evaluated and reasonable safety standards adopted, covering such elements as adequacy of nearby water supplies, routes or throughways for fire equipment, addresses and street signs, and maintenance. The ultimate objectives for fire-safe planning and construction are (1) improve the ability of communities and other high value assets that will survive a large, high intensity wildfire with minimal fire suppression effort and (2) provide for improved citizen and firefighter safety.

California Fire Plan 2003

Assets at Risk

Resource	Asset Value Basis	Level of Disaggregation	Levels of Value*	Strength of Methodology
Life and safety	Non-economic values are not quantified	By population density	National, state and local	High
Air quality	Average dollar impact from particulate matter (PM10) emitted per acre burned; non-commodity assets also exist	Air quality basins (13) and basic fuel types (2)	National, state and local	Low
Range	Dollar cost of replacement feed per acre of rangeland burned	Values by regions (8), cover types (9) and ownership classes (5)	State and local	High
Recreation on public wildlands	Average dollar loss per acre burned; non-commodity assets also exist	Statewide average by public ownership categories (5)	National, state and local	Low
Structures	Average dollar loss per home burned; non-commodity assets also exist	Statewide average	State and local	High
Timber	Average dollar loss per acre burned	Values by regions (6) and ownership categories (4)	National, state and local	High
Water and watersheds	Range of economic impacts per acre for value of increased water yields; cost of sediment removal; loss of reservoir capacity; effects on hydroelectric generation; costs of watershed rehabilitation; non-commodity assets also exist	Statewide ranges of economic impacts	National, state and local	Low to medium
Wildlife, habitat, plants and ecosystem health	Qualitative discussion of the tradeoffs in fire impacts	Statewide	State and local	Low
Other resource assets, cultural and historic resources, unique scenic areas	These non-commodity assets cannot be quantified adequately; descriptive enumeration only	Statewide (generically) or place-specific	National, state and local	Low to medium

Fire History

20 Largest California Wildland Fires by Structures Destroyed

	FIRE NAME/*CAUSE*	DATE	COUNTY	ACRES	*STRUCTURES*	DEATHS
1	TUNNEL *(REKINDLE)*	October 1991	ALAMEDA	1,600	2,900	25
*2	CEDAR *(HUMAN)*	October 2003	SAN DIEGO	273,246	2,820	15
*3	OLD *(HUMAN)*	October 2003	SAN BERNARDINO	91,281	1,003	6
4	JONES *(UNDETERMINED)*	October 1999	SHASTA	26,200	954	1
5	PAINT *(ARSON)*	June 1990	SANTA BARBARA	4,900	641	1
6	FOUNTAIN *(ARSON)*	August 1992	SHASTA	63,960	636	0
7	CITY OF BERKELEY *(POWERLINES)*	September 1923	ALAMEDA	130	584	0
8	BEL AIR *(UNDETERMINED)*	November 1961	LOS ANGELES	6,090	484	0
9	LAGUNA FIRE *(ARSON)*	October 1993	ORANGE	14,437	441	0
*10	PARADISE *(HUMAN)*	October 2003	SAN DIEGO	56,700	415	2
11	LAGUNA *(POWERLINES)*	September 1970	SAN DIEGO	175,425	382	5
12	PANORAMA *(ARSON)*	November 1980	SAN BERNARDINO	23,600	325	4
13	TOPANGA *(ARSON)*	November 1993	LOS ANGELES	18,000	323	3
14	49ER *(BURNING DEBRIS)*	September 1988	NEVADA	33,700	312	0
*15	SIMI *(UNDER INVESTIGATION)*	October 2003	VENTURA	108,204	300	0
16	SYCAMORE *(MISC. - KITE)*	July 1977	SANTA BARBARA	805	234	0
17	CANYON *(VEHICLE)*	September 1999	SHASTA	2,580	230	0
18	KANNAN *(ARSON)*	October 1978	LOS ANGELES	25,385	224	0
19	KINNELOA *(CAMPFIRE)*	October 1993	LOS ANGELES	5,485	196	1
*19	GRAND PRIX *(HUMAN)*	October 2003	SAN BERNARDINO	69,894	136	0
20	OLD GULCH *(EQUIP. USE)*	August 1992	CALAVERAS	17,386	170	0

Note that this list does not include fire jurisdiction. These are the Top 20 within California, regardless of whether they were state, federal, or local responsibility. Also note that "structures" is meant to include all loss - homes and outbuildings, etc.

4/22/2004

Los Angeles County accounts for 20%

20 Largest California Wildland Fires by Acres Burned

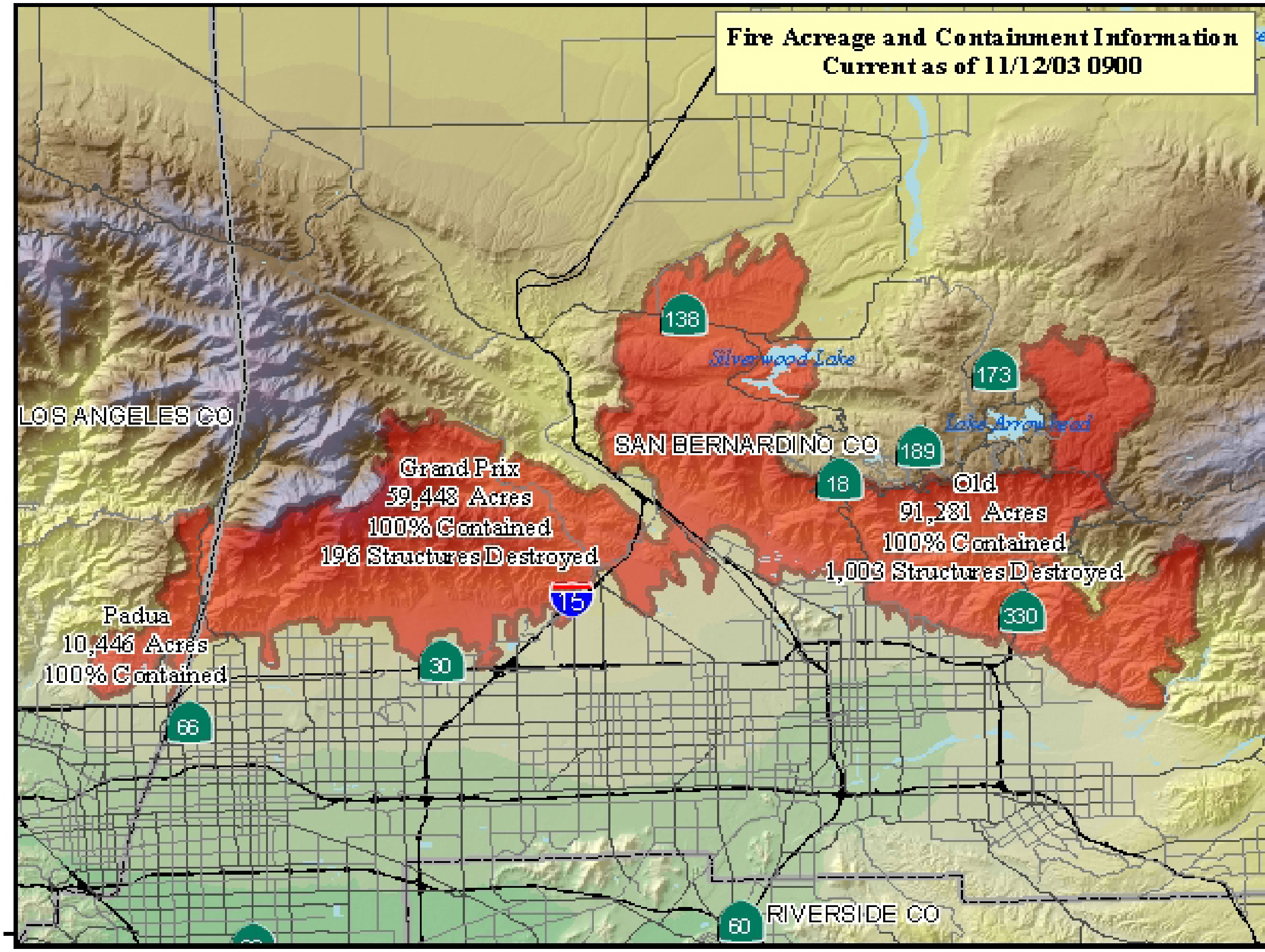
	FIRE NAME/CAUSE	DATE	COUNTY	ACRES	STRUCTURES	DEATHS
*1	CEDAR *(HUMAN)*	October 2003	SAN DIEGO	273,246	2,820	15
2	MATILIJA *(UNDETERMINED)*	September 1932	VENTURA	220,000	0	0
3	MARBLE CONE *(LIGHTNING)*	July 1977	MONTEREY	177,866	0	0
4	LAGUNA *(POWERLINES)*	September 1970	SAN DIEGO	175,425	382	5
5	MCNALLY *(HUMAN)*	July 2002	TULARE	150,696	17	0
6	STANISLAUS COMPLEX *(LIGHTNING)*	August 1987	TUOLUMNE	145,980	28	1
7	BIG BAR COMPLEX *(LIGHTNING)*	August 1999	TRINITY	140,948	0	0
8	CAMPBELL COMPLEX *(POWERLINES)*	August 1990	TEHAMA	125,892	27	0
9	WHEELER *(ARSON)*	July 1985	VENTURA	118,000	26	0
*10	SIMI *(UNDER INVESTIGATION)*	August 1996	VENTURA	108,204	300	0
11	HWY. 58 *(VEHICLE)*	August 1996	SAN LUIS OBISPO	106,668	13	0
12	CLAMPITT *(POWERLINES)*	September 1970	LOS ANGELES	105,212	86	4
13	WELLMAN *(EQUIP. USE)*	June 1966	SANTA BARBARA	93,600	0	0
*14	OLD *(HUMAN)*	October 2003	SAN BERNARDINO	91,281	1,003	6
15	KIRK *(LIGHTNING)*	September 1999	MONTEREY	86,700	0	0
16	REFUGIO *(MISC. - STRUCTURE)*	September 1955	SANTA BARBARA	84,770	20	0
17	FORK *(UNDETERMINED)*	August 1996	LAKE	82,980	40	0
18	SCARFACE *(LIGHTNING)*	August 1977	MODOC	79,904	0	0
19	LAS PILITAS *(EQUIP. USE)*	July 1985	SAN LUIS OBISPO	74,640	41	0
20	MANTER *(UNDER INVESTIGATION)*	July 2000	TULARE	74,439	15	0

There is no doubt that there were fires with significant acreage loss in years prior to 1932, but those records are less reliable, and this list is meant to give an overview of the large acreage-loss fires in more recent times. (Also note that this list does not include fire jurisdiction. These are the top 20 within the state, regardless of whether they were state, federal, or local responsibility.)

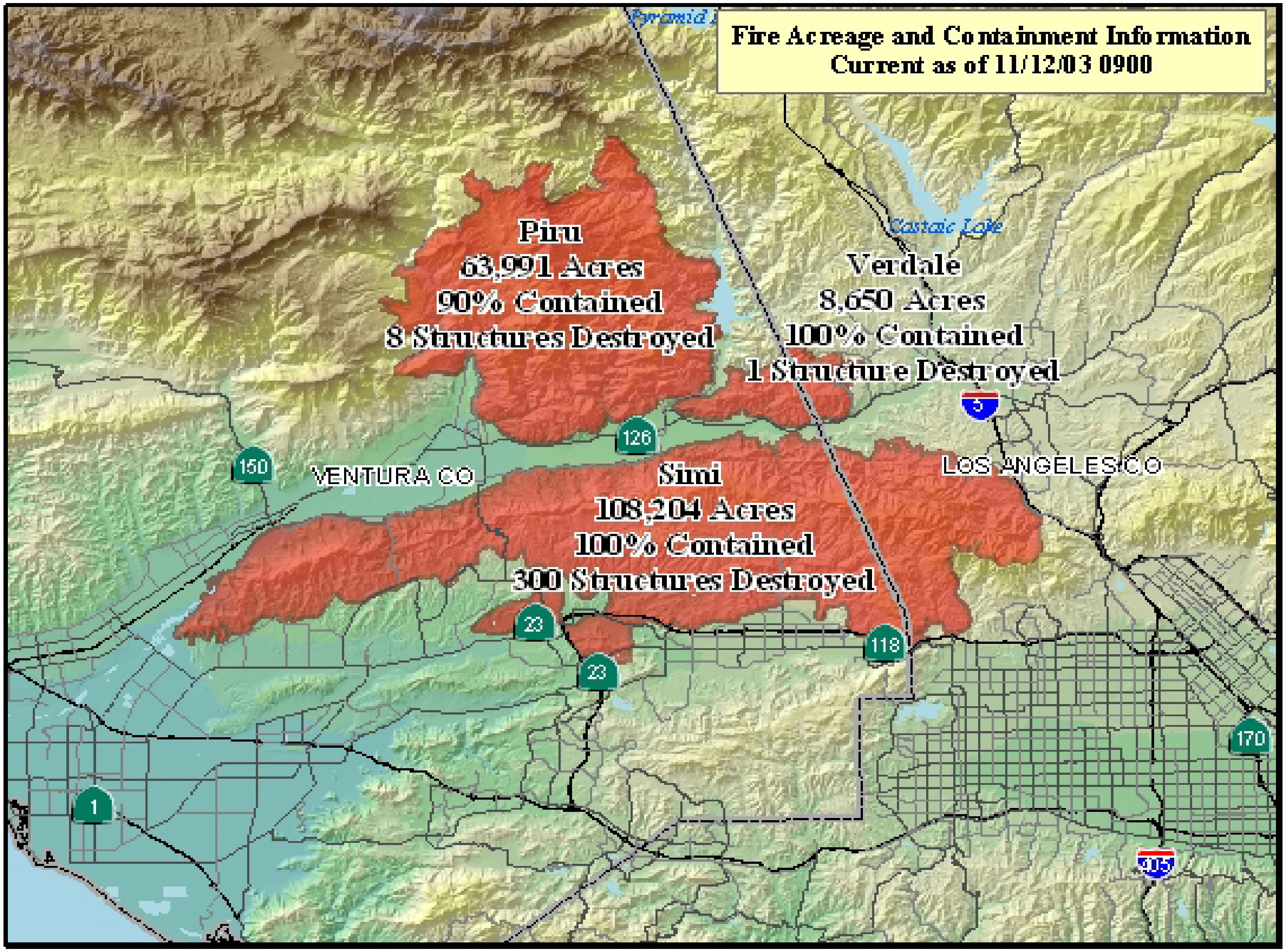
Los Angeles County accounts for 5%

California Fires 11/12/03
Southern California Fires

Grand Prix Fire within Los Angeles County (11/2003)

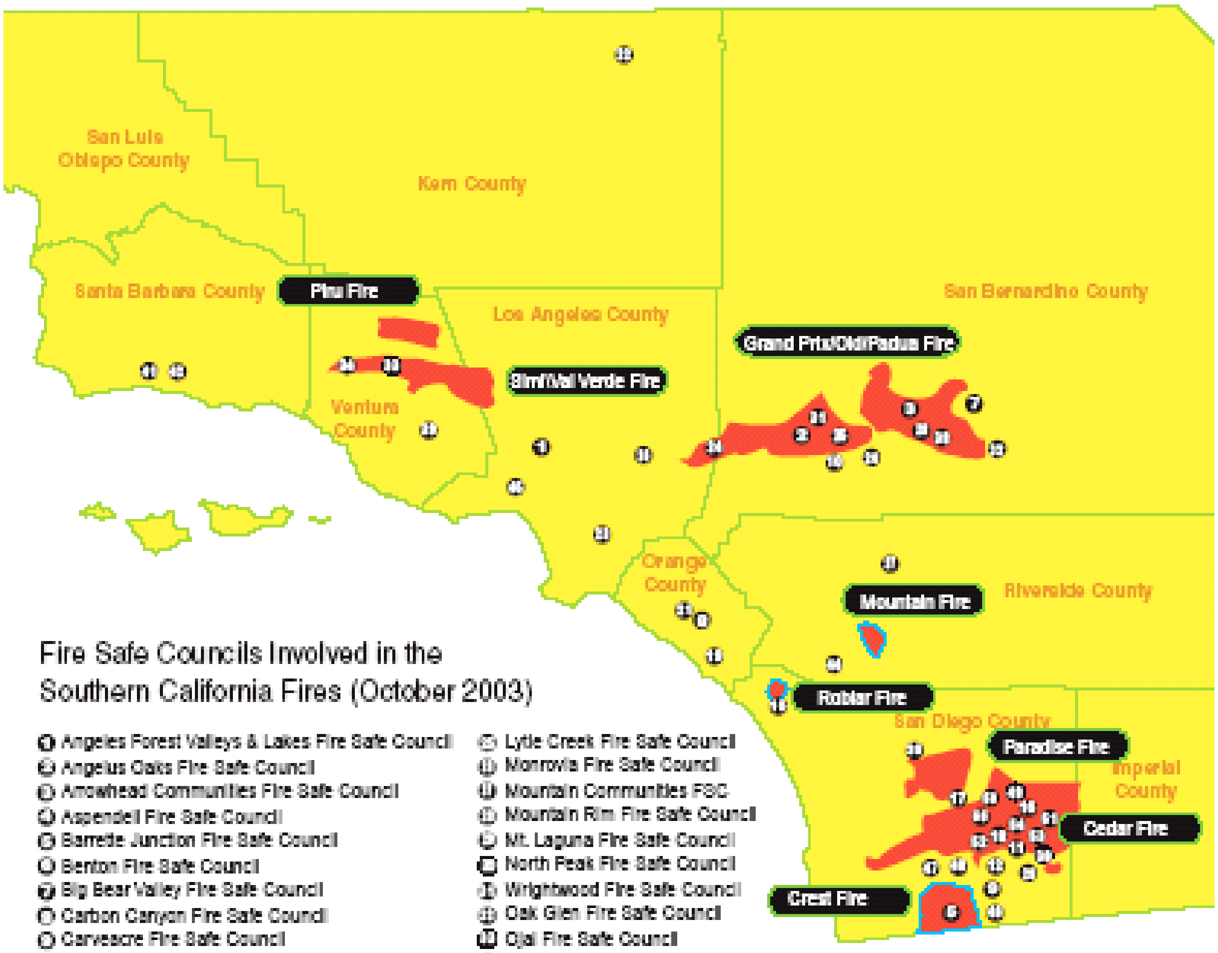


Simi & Verdale Fires within Los Angeles County (11/2003)



Southern California Region
Fire Safe Councils

Southern California Fires as of October 31, 2003 (approximate)



Fire Safe Councils Involved in the Southern California Fires (October 2003)

- Angeles Forest Valleys & Lakes Fire Safe Council
- Angelus Oaks Fire Safe Council
- Arrowhead Communities Fire Safe Council
- Aspendell Fire Safe Council
- Barrette Junction Fire Safe Council
- Benton Fire Safe Council
- Big Bear Valley Fire Safe Council
- Carbon Canyon Fire Safe Council
- Carveacre Fire Safe Council
- Crest Forest Chapter
- Cuyamaca Fire Safe Council
- Descanso Fire Safe Council
- Eastern Sierra Fire Safe Council
- Eastern Sierra Regional Fire Safe Council
- Fall Brook FSC
- Fire Safe Council of Greater Julian
- Fire Safe Council of San Diego County
- Harrison Park Fire Safe Council
- Greater Laguna Coast Fire Safe Council
- Green Valley Chapter
- Inter Canyon Fire Safe Council
- Kern River Valley Fire Safe Council
- LA County Fire Safe Council
- Lake Arrowhead Chapter
- Lytle Creek Fire Safe Council
- Monrovia Fire Safe Council
- Mountain Communities FSC
- Mountain Rim Fire Safe Council
- Mt. Laguna Fire Safe Council
- North Peak Fire Safe Council
- Wrightwood Fire Safe Council
- Oak Glen Fire Safe Council
- Ojai Fire Safe Council
- Ojai Fire Safe Council and The C.R.E.W.
- Palomar Mountain Fire Safe Council
- Pine Glade Fire Safe Council
- Wheeler Crest Fire Safe Council
- Running Springs/Arrowbear Chapter
- Ventura County Fire Safe Council
- San Luis Obispo County FireSafe Council
- Santa Barbara County Fire Safe Council
- Santa Barbara South Coast Fire Safe Council
- South Fork Bishop Creek Fire Safe Council
- Southwest Riverside County Fire Safe Council
- Topanga Citizen's Firesafe Committee
- Campo Fire Safe Council
- Alpine Fire Safe Council
- Sheriliton Valley
- Whispering Pines FSC
- Wynola Fire Safe Councils
- Kentwood II Fire Safe Council
- Pine Hill Fire Safe Council
- KQ Ranch Fire Safe Council
- Kentwood Fire Safe Council
- Julian Estates FSC

Characteristics of Wildfire Smoke

The behavior of smoke depends on many factors, including the fire's size and location, the topography of the area and the weather. Inversions are common in mountainous terrain. Smoke often fills the valleys, where people usually live. Smoke levels are unpredictable: a wind that usually clears out a valley may simply blow more smoke in, or may fan the fires, causing a worse episode the next day. Smoke concentrations change constantly. By the time public health officials can issue a warning or smoke advisory, the smoke may already have cleared. National Weather Service satellite photos, weather and wind forecasts, and knowledge of the area can all help in predicting how much smoke will come into an area, but predictions are rarely accurate for more than a few hours.

Estimating Particulate Matter Levels

Particulate matter levels are measured as micrograms (*m*g) of particles per cubic meter of air. Most particle monitoring devices measure particulate matter with a median diameter of 10 micrometers or less (PM_{10}). An increasing number of monitors now measure smaller particles, also known as fine particles, which have median diameters of 2.5 micrometers or less ($PM_{2.5}$). In wildfire smoke, most particles are less than one micrometer, so the values obtained by measuring either PM_{10} or $PM_{2.5}$ are virtually interchangeable, and are treated as such in this document.

Communities with established air quality programs may issue public alerts based on predicted 24-hour average concentrations of particulate matter. Smoke emergencies need to be handled differently, however, as smoke concentrations generally tend to be very high for only a few hours at a time. These short-term peaks may cause some of the most deleterious health effects.

Another factor is public perception. Since smoke is so effective at scattering light, visibility changes drastically as smoke concentrations increase. Even without being told, the public can tell when the smoke is getting worse, and they want authorities to respond to changes as they are happening. Many communities don't have continuous PM monitoring, and therefore need to estimate particle levels. Continuous PM monitors give an instant reading of particulate matter concentrations. However, visibility can sometimes serve as a good surrogate. Even in areas with monitors, this index can be useful, since smoke levels change constantly and can vary dramatically even between monitors that are near one another. A visibility index gives members of the public a quick way to assess smoke levels for themselves.

Estimating particulate matter concentrations from visibility assessment

Categories	Visibility in Miles	Particulate matter levels* (1-hour average, $\mu g/m^3$)
Good	10 miles and up	0 - 40
Moderate	6 to 9	41 - 80
Unhealthy for Sensitive Groups	3 to 5	81 - 175
Unhealthy	1 1/2 to 2 1/2	176 - 300
Very Unhealthy	1 to 1 1/4	301 - 500
Hazardous	3/4 mile or less	over 500

*In wildfire smoke, most particles are less than one micrometer, so the values obtained by measuring either PM_{10} or $PM_{2.5}$ are virtually interchangeable, and are treated as such in this document. Therefore, in the table above, the different particle levels can be measured using either PM_{10} or $PM_{2.5}$ monitors.

Smoke Hazards as a Result of Wildland Fires

Smoke is composed primarily of carbon dioxide, water vapor, carbon monoxide, particulate matter, hydrocarbons and other organic chemicals, nitrogen oxides, trace minerals and several thousand other compounds. The actual composition of smoke depends on the fuel type, the temperature of the fire, and the wind conditions. Different types of wood and vegetation are composed of varying amounts of cellulose, lignin, tannins and other polyphenolics, oils, fats, resins, waxes and starches, which produce different compounds when burned.

Particulate matter is the principal pollutant of concern from wildfire smoke for the relatively short-term exposures (hours to weeks) typically experienced by the public. Particulate matter is a generic term for particles suspended in the air, typically as a mixture of both solid particles and liquid droplets. Particles from smoke tend to be very small - less than one micrometer in diameter. For purposes of comparison, a human hair is about 60 micrometers in diameter. Particulate matter in wood smoke has a size range near the wavelength of visible light (0.4 – 0.7 micrometers). Thus, smoke particles efficiently scatter light and reduce visibility. Moreover, such small particles can be inhaled into the deepest recesses of the lung and are thought to represent a greater health concern than larger particles.

Another pollutant of concern during smoke events is carbon monoxide. Carbon monoxide is a colorless, odorless gas, produced by incomplete combustion of wood or other organic materials. Carbon monoxide levels are highest during the smoldering stages of a fire. Other air pollutants, such as acrolein, benzene, and formaldehyde, are present in smoke, but in much lower concentrations than particulate matter and carbon monoxide.

The effects of smoke range from eye and respiratory tract irritation to more serious disorders, including reduced lung function, bronchitis, exacerbation of asthma, and premature death. Studies have found that fine particles are linked (alone or with other pollutants) with increased mortality and aggravation of pre-existing respiratory and cardiovascular disease. In addition, particles are respiratory irritants, and exposures to high concentrations of particulate matter can cause persistent cough, phlegm, wheezing and difficulty breathing. Particles can also affect healthy people, causing respiratory symptoms, transient reductions in lung function, and pulmonary inflammation. Particulate matter can also affect the body's immune system and make it more difficult to remove inhaled foreign materials from the lung, such as pollen and bacteria. The principal public health threat from short-term exposures to smoke is considered to come from exposure to particulate matter.

Wildfire smoke also contains significant quantities of respiratory irritants. Formaldehyde and acrolein are two of the principal irritant chemicals that add to the cumulative irritant properties of smoke, even though the concentrations of these chemicals individually may be below levels of public health concern.

Sensitive Populations

Most healthy adults and children will recover quickly from smoke exposures and will not suffer long-term consequences. However, certain sensitive populations may experience more severe short-term and chronic symptoms from smoke exposure. Much of the information about how particulate matter affects these groups has come from studies involving airborne particles in cities, though a few studies examining the effects of exposure to smoke suggest that the health effects of wildfire smoke are likely to be similar. More research is needed to determine whether particles from wildfires affect susceptible subpopulations differently.

Individuals with asthma and other respiratory diseases: Levels of pollutants that may not affect healthy people may cause breathing difficulties for people with asthma or other chronic lung diseases. Asthma, derived from the Greek word for panting, is a condition characterized by chronic inflammation of the airways, with intermittent bronchial-constriction and airflow obstruction, causing shortness of breath, wheezing, chest tightness, coughing, sometimes accompanied by excess phlegm production.

During an asthma attack, the muscles tighten around the airways and the lining of the airways becomes inflamed and swollen, constricting the free flow of air. Because children's airways are narrower than those of adults, irritation that would create minor problems for an adult may result in significant obstruction in the airways of a young child. However, the highest mortality rates from asthma occur among older adults. Individuals with chronic obstructive pulmonary disease (COPD), which is generally considered to encompass emphysema and chronic bronchitis, may also experience a worsening of their conditions because of exposure to wildfire smoke. Patients with COPD often have an asthmatic component to their condition, which may result in their experiencing asthma-like symptoms. However, because their pulmonary reserve has typically been seriously compromised, additional bronchial-constriction in individuals with COPD may result in symptoms requiring medical attention. Epidemiological studies have indicated that individuals with COPD run an increased risk of requiring emergency medical care after exposure to particulate matter or forest fire smoke. Exposure to smoke may also depress the lung's ability to fight infection. People with COPD may develop lower respiratory infections after exposure to wildfire smoke, which may require urgent medical care as well. In addition, because COPD is usually the result of many years of smoking, individuals with this condition may also have heart disease, and are potentially at risk from both conditions.

Individuals with airway hyper-responsiveness: A significant fraction of the population may have airway hyper-responsiveness, an exaggerated tendency of the bronchi and bronchioles to constrict in response to respiratory irritants and other stimuli. While airway hyper-responsiveness is considered a hallmark of asthma, this tendency may also be found in many non-asthmatics, as well; for example, during and following a lower respiratory tract infection. In such individuals, smoke exposure may cause bronchial-spasm and asthma-like symptoms.

Individuals with cardiovascular disease: Diseases of the circulatory system include, among others, high blood pressure, cardiovascular diseases, such as coronary artery disease and congestive heart failure, and cerebro-vascular conditions, such as atherosclerosis of the arteries bringing blood to the brain. These chronic conditions can render individuals susceptible to attacks of angina pectoris, heart attacks, sudden death due to a cardiac arrhythmia, acute congestive heart failure, or stroke. Cardiovascular diseases represent the leading cause of death in the United States, responsible for about 30 to 40 percent of all deaths each year. The vast majority of these deaths are in people over the age of 65. Studies have linked urban particulate matter to increased risks of heart attacks, cardiac arrhythmias, and other adverse effects in those with cardiovascular disease. People with chronic lung or heart disease may experience one or more of the following symptoms: shortness of breath, chest tightness, pain in the chest, neck, shoulder or arm, palpitations, or unusual fatigue or lightheadedness. Chemical messengers released into the blood because of particle-related lung inflammation may increase the risk of blood clot formation, angina episodes, heart attacks and strokes.

The elderly. In several studies researchers have estimated that tens of thousands of elderly people die prematurely each year from exposure to particulate air pollution, probably because the elderly are more likely to have pre-existing lung and heart diseases, and therefore are more susceptible to particle-associated effects. The elderly may also be more affected than younger people because important respiratory defense mechanisms may decline with age. Particulate air pollution can compromise the function of alveolar macrophages, cells involved in immune defenses in the lungs, potentially increasing susceptibility to bacterial or viral respiratory infections.

Children. Children, even those without any pre-existing illness or chronic conditions, are considered a sensitive population because their lungs are still developing, making them more susceptible to air pollution than healthy adults. Several factors lead to increased exposure in children compared with adults: they tend to spend more time outside; they engage in more vigorous activity, and they inhale more air (and therefore more particles) per pound of body weight. Studies have shown that particulate pollution is associated with increased respiratory symptoms and decreased lung function in children, including symptoms such as episodes of coughing and difficulty breathing. These can result in school absences and limitations of normal childhood activities.

Pregnant women. While there have not been studies of the effects of exposure to wildfire smoke on pregnancy outcomes, there is substantial evidence of adverse effects of repeated exposures to cigarette smoke, including both active and passive smoking. Wildfire smoke contains many of the same compounds as cigarette smoke. In addition, recent data suggest that exposures to ambient air pollution in cities may result in low birth weight and possibly other, more serious adverse reproductive effects. Therefore, it would be prudent to consider pregnant women as a potentially susceptible population as well.

Smokers. People who smoke, especially those who have smoked for many years, have already compromised their lung function. However, due to adaptation of their lungs to ongoing irritation, smokers are less likely to report symptoms from exposure to irritant chemicals than are nonsmokers. However, they may still be injured by wildfire smoke. Therefore, some smokers may unwittingly put themselves at greater risk of potentially harmful wildfire smoke exposures, believing that they are not being affected.

Hazards Associated Cleanup of Wildland Fires

Heat sources may remain as a result of smoldering wood or other debris that could reignite if contact is made with a combustible material or if oxygen becomes available. Workers and employers must therefore take extra precautions.

Cleanup activities may involve walking on unstable surfaces such as construction debris, trees and other vegetation. Piles of debris and other unstable work surfaces create a risk for traumatic injury from slips, falls, puncture wounds from nails and sharp objects, and collapsing materials. Extreme caution is necessary when working on these surfaces. Protective equipment, such as hard hats, safety glasses, leather gloves, and steel toe boots should be considered to minimize the risk of injury.

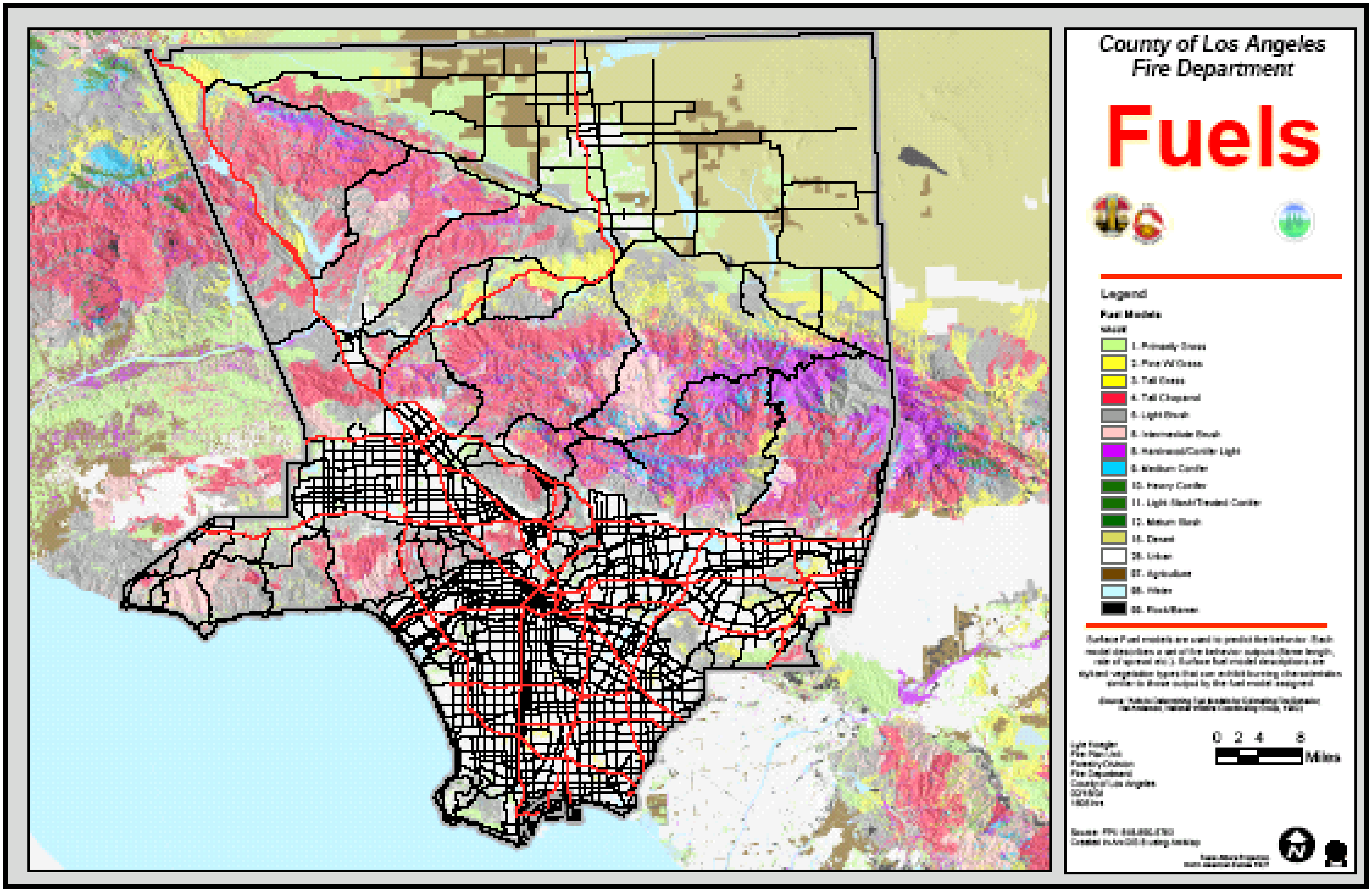
Cleanup workers are at risk for developing serious musculoskeletal injuries to the hands, back, knees, and shoulders. Special attention is needed to avoid back injuries associated with manual lifting and handling of debris and building materials.

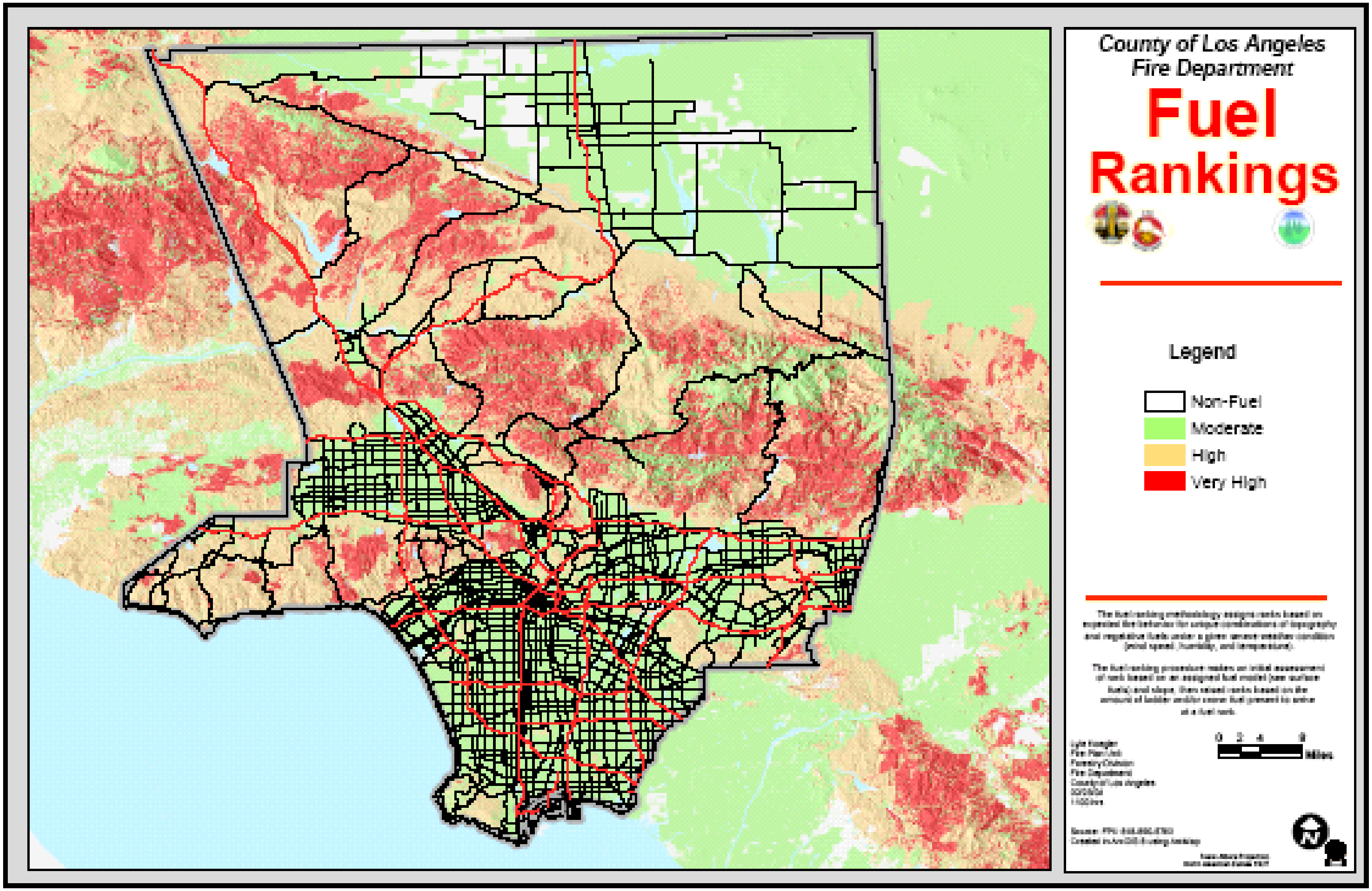
Cleanup workers are at serious risk for developing heat stress. Excessive exposure to hot environments can cause a variety of heat-related problems, including heat stroke, heat exhaustion, heat cramps, and fainting

Fires can rearrange and damage natural walkways, as well as sidewalks, parking lots, roads, and buildings. Never assume that fire-damaged structures or ground are stable. Buildings that have been burned may have suffered structural damage and could be dangerous.

Fires to commercial and residential buildings and water used to fight the fire can dislodge tanks, drums, pipes, and equipment, which may contain hazardous materials such as pesticides or propane. Containers may be damaged by fire and heat.

Urban Interface & Wild Land Fires




County of Los Angeles
Fire Department
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Rankings
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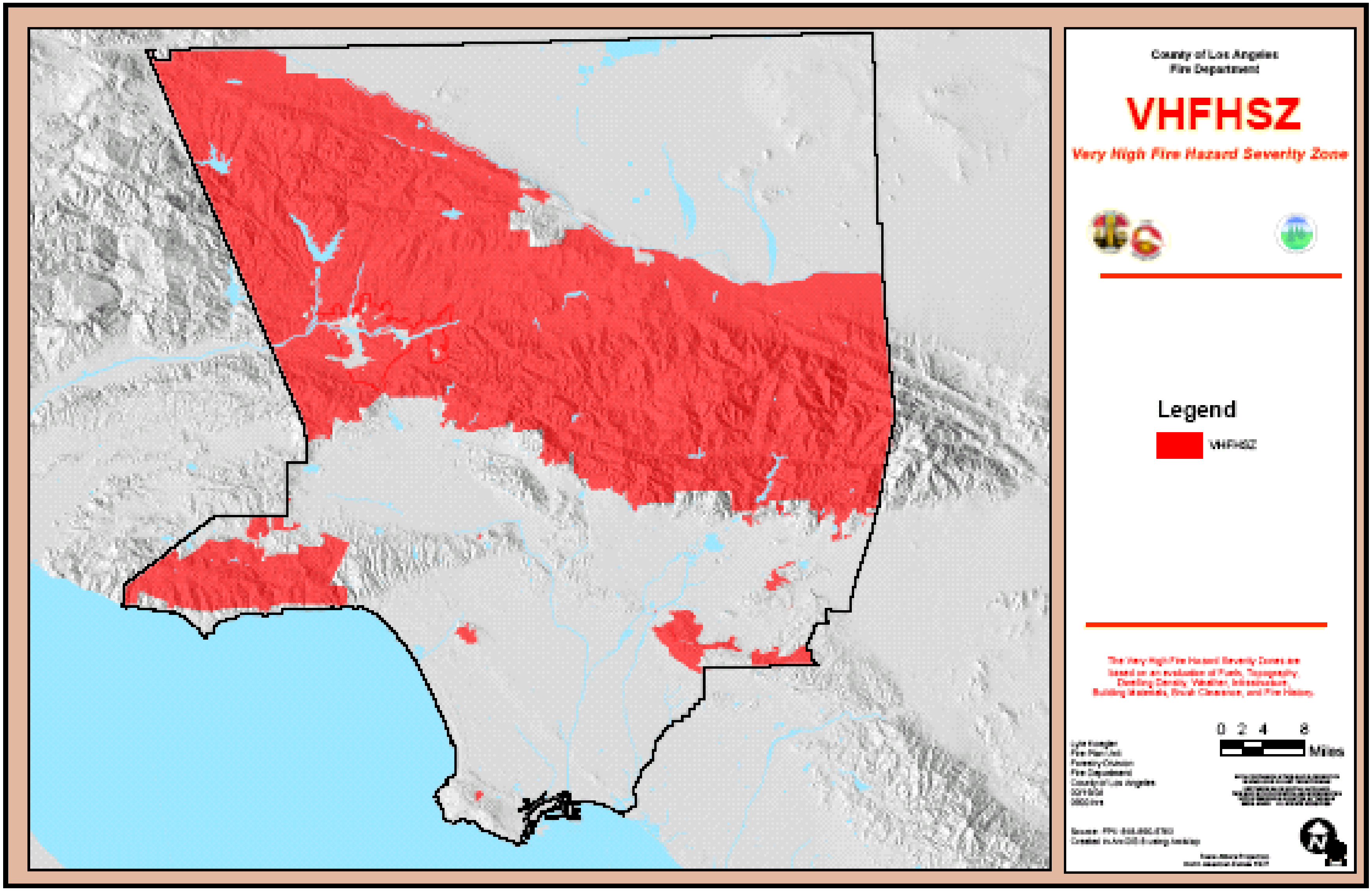
Moderate
High
Very High
Miles


County of Los Angeles
Fire Department
VHFHSZ
Very High Fire Hazard Severity Zone
Legend
VHFHSZ
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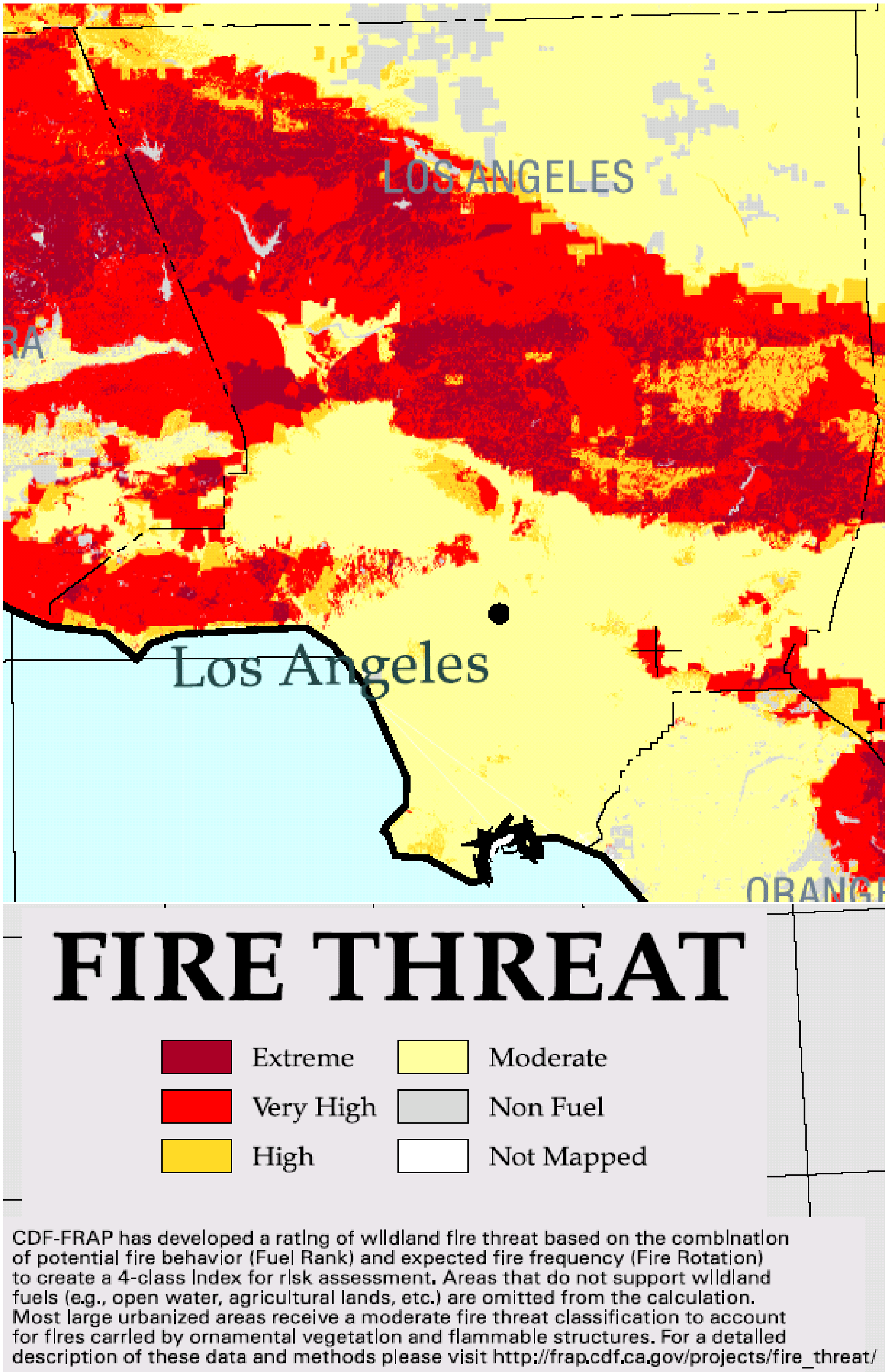
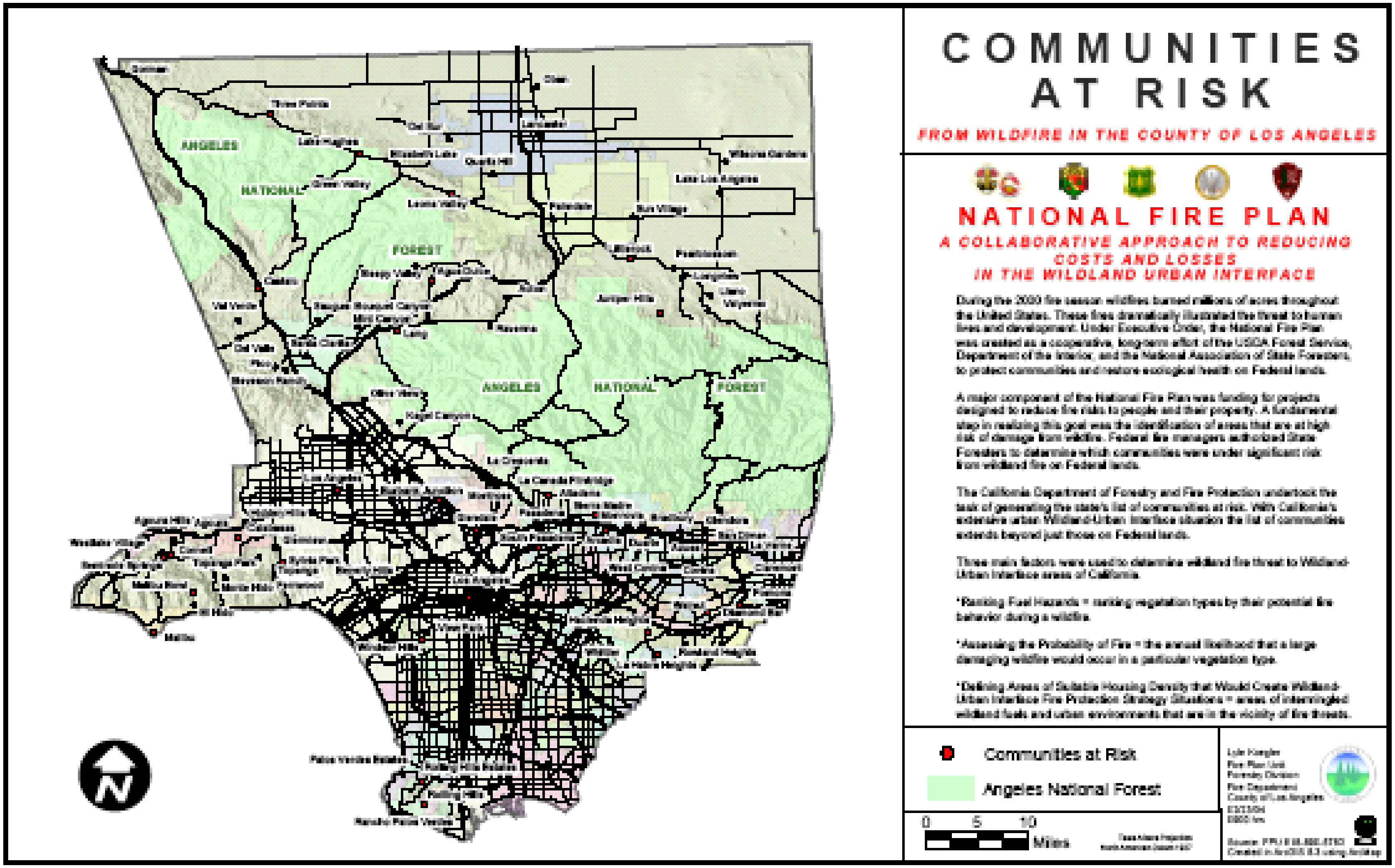
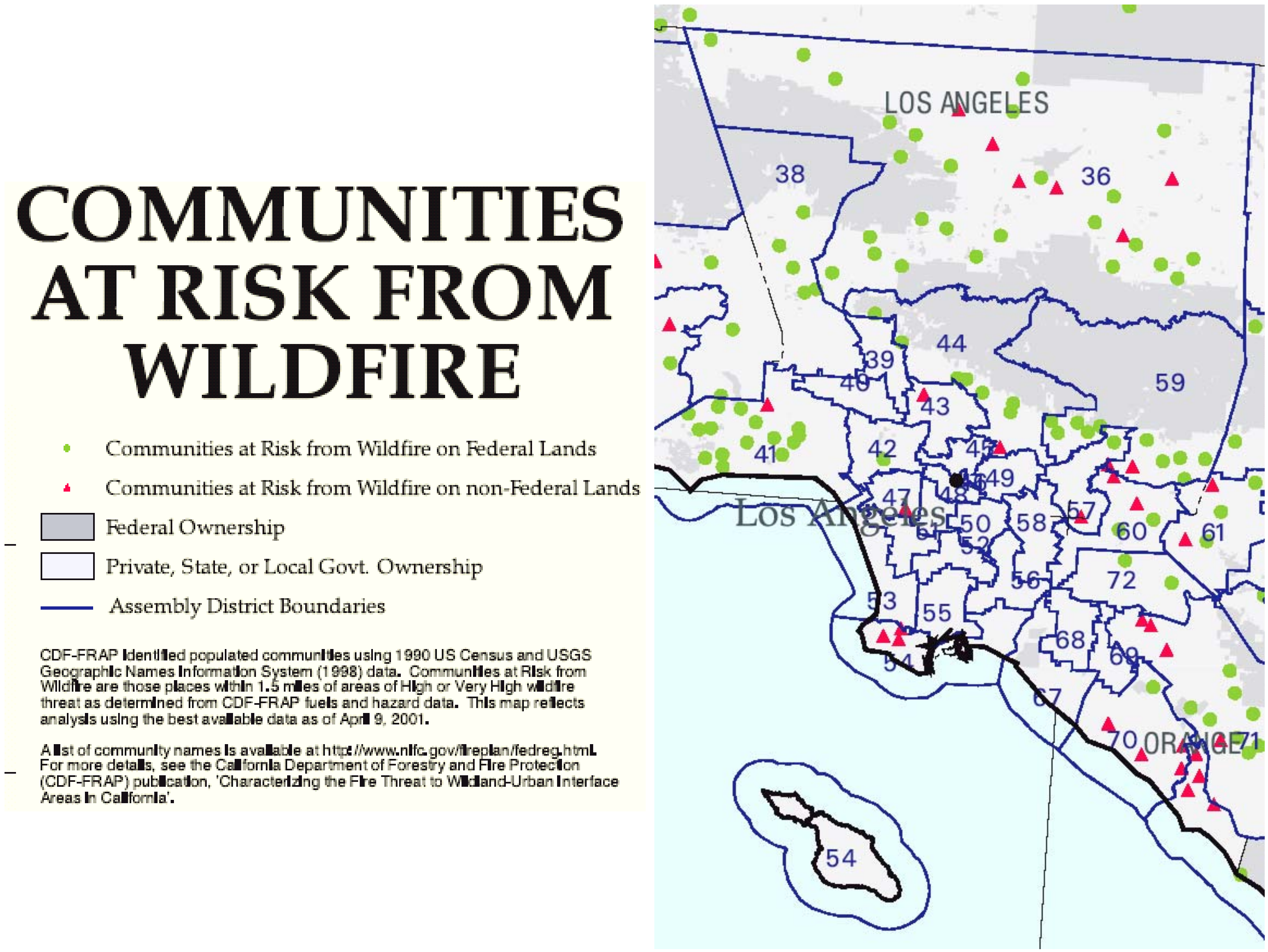
Miles


LOS ANGELES
Los Angeles
FIRE THREAT
Extreme
Very High
High
Moderate
Non Fuel
Not Mapped
CDF-FRAP has developed a rating of wildland fire threat based on the combination of potential fire behavior (Fuel Rank) and expected fire frequency (Fire Rotation) to create a 4-class Index for risk assessment. Areas that do not support wildland fuels (e.g., open water, agricultural lands, etc.) are omitted from the calculation. Most large urbanized areas receive a moderate fire threat classification to account for fires carried by ornamental vegetation and flammable structures. For a detailed description of these data and methods please visit http://frap.cdf.ca.gov/projects/fire_threat/


COMMUNITIES AT RISK
FROM WILDFIRE IN THE COUNTY OF LOS ANGELES
NATIONAL FIRE PLAN
A COLLABORATIVE APPROACH TO REDUCING COSTS AND LOSSES IN THE WILDLAND URBAN INTERFACE
During the 2000 fire season wildfires burned millions of acres throughout the United States. These fires dramatically illustrated the threat to human lives and development. Under Executive Order, the National Fire Plan was created as a cooperative, long-term effort of the USDA Forest Service, Department of the Interior, and the National Association of State Foresters, to protect communities and restore ecological health on Federal lands.
A major component of the National Fire Plan was funding for projects designed to reduce fire risks to people and their property. A fundamental step in realizing this goal was the identification of areas that are at high risk of damage from wildfire. Federal fire managers authorized State Foresters to determine which communities were under significant risk from wildland fire on Federal lands.
The California Department of Forestry and Fire Protection undertook the task of generating the state's list of communities at risk. With California's extensive urban Wildland-Urban Interface situation the list of communities extends beyond just those on Federal lands.
Three main factors were used to determine wildland fire threat to Wildland-Urban Interface areas of California.
*Ranking Fuel Hazards = ranking vegetation types by their potential fire behavior during a wildfire.
*Assessing the Probability of Fire = the annual likelihood that a large damaging wildfire would occur in a particular vegetation type.
*Defining Areas of Suitable Housing Density that Would Create Wildland-Urban Interface Fire Protection Strategy Situations = areas of intermingled wildland fuels and urban environments that are in the vicinity of fire threats.
Communities at Risk
Angeles National Forest
0 5 10
Miles
ANGELES
NATIONAL
FOREST


COMMUNITIES AT RISK FROM WILDFIRE
Communities at Risk from Wildfire on Federal Lands
Communities at Risk from Wildfire on non-Federal Lands
Federal Ownership
Private, State, or Local Govt. Ownership
Assembly District Boundaries
CDF-FRAP identified populated communities using 1990 US Census and USGS Geographic Names Information System (1998) data. Communities at Risk from Wildfire are those places within 1.5 miles of areas of High or Very High wildfire threat as determined from CDF-FRAP fuels and hazard data. This map reflects analysis using the best available data as of April 9, 2001.
A list of community names is available at http://www.nifc.gov/fireplan/fedreg.html. For more details, see the California Department of Forestry and Fire Protection (CDF-FRAP) publication, 'Characterizing the Fire Threat to Wildland-Urban Interface Areas in California'.
LOS ANGELES
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Los Angeles
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ORANGE
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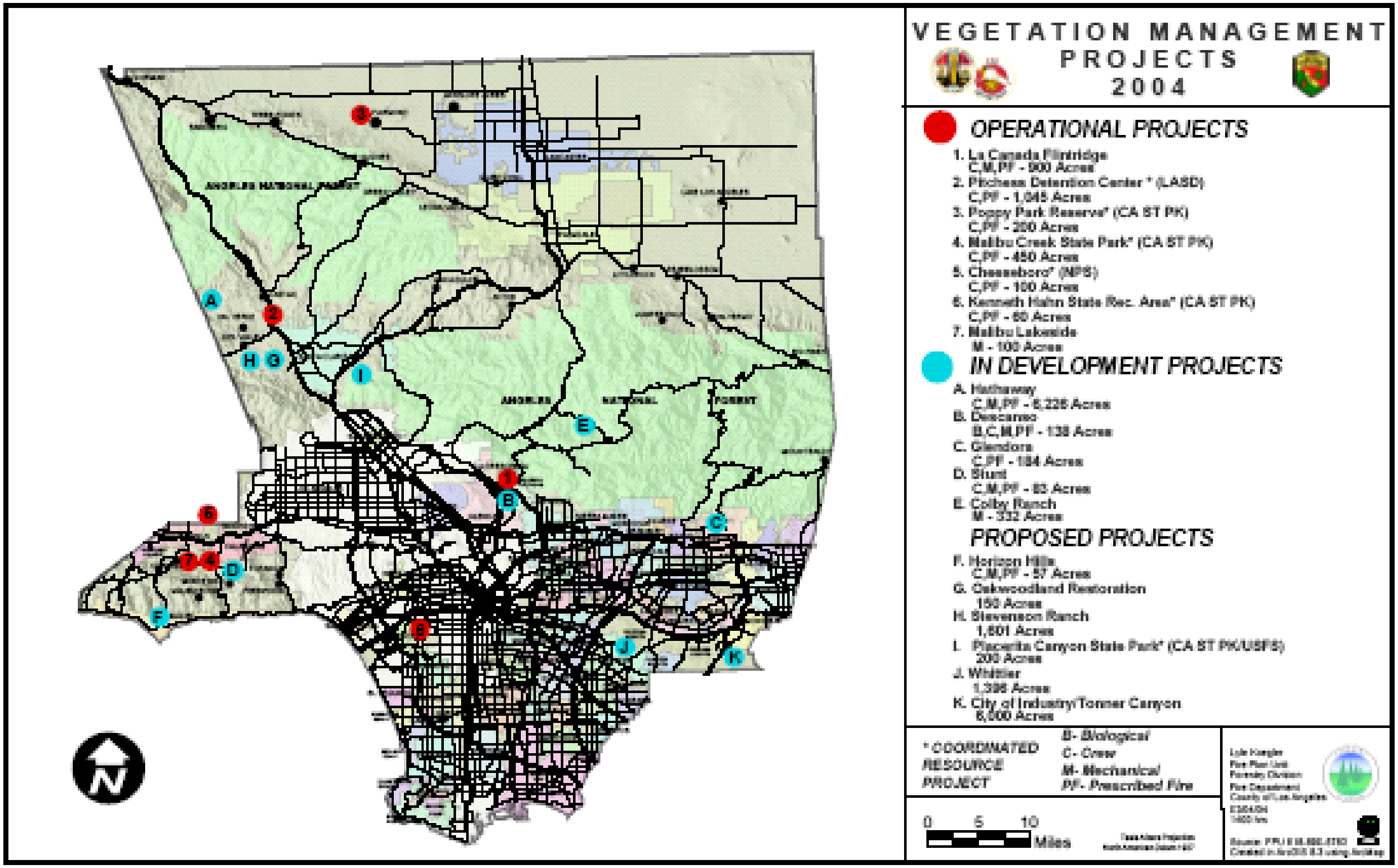

VEGETATION MANAGEMENT PROJECTS 2004
OPERATIONAL PROJECTS
1. La Canada Flintridge C,M,PF - 900 Acres
2. Pitchess Detention Center * (LASD) C,PF - 1,045 Acres
3. Poppy Park Reserve* (CA ST PK) C,PF - 200 Acres
4. Malibu Creek State Park* (CA ST PK) C,PF - 450 Acres
5. Cheeseboro* (NPS) C,PF - 100 Acres
6. Kenneth Hahn State Rec. Area* (CA ST PK) C,PF - 60 Acres
7. Malibu Lakeside M - 100 Acres
IN DEVELOPMENT PROJECTS
A. Hathaway C,M,PF - 6,226 Acres
B. Descanso B,C,M,PF - 138 Acres
C. Glendora C,PF - 184 Acres
D. Stunt C,M,PF - 83 Acres
E. Colby Ranch M - 332 Acres
PROPOSED PROJECTS
F. Horizon Hills C,M,PF - 57 Acres
G. Oakwoodland Restoration 150 Acres
H. Stevenson Ranch 1,601 Acres
I. Placerita Canyon State Park* (CA ST PK/USFS) 200 Acres
J. Whittier 1,398 Acres
K. City of Industry/Tonner Canyon 6,000 Acres
* COORDINATED RESOURCE PROJECT
B- Biological
C- Crew
M- Mechanical
PF- Prescribed Fire
0 5 10 Miles
N

Winds (Destructive)

Winds (Destructive) were rated a HIGH PRIORITY HAZARD in SMMUSD & SMC.

Vulnerability and Impact

School District and College Facilities are located in areas subject to Severe Weather and are considered vulnerable to damage. Depending on the severity and scope of a catastrophic severe storm, it is estimated that .12% of College and School District assets would be impacted.

Windstorms

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

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

Santa Ana Winds

Based on local history, most incidents of high wind in the Los Angeles County are the result of Santa Ana wind conditions. While high impact wind incidents are not frequent in the area, significant Santa Ana wind events have been known to negatively impact areas of the County. Santa Ana winds are blustery, warm – (often hot) – dry winds that blow from the east or northeast. These occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles basin. Typically they occur from October to March when cooler air in the desert increases air pressure and creates strong westerly winds. Generally speaking, wind speed must reach 25 knots to be classified as a Santa Ana wind.

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

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

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

Hazard Extent

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

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

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

Vulnerabilities

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

Life and Property

Based on the historical data for the region, windstorm events can be expected, perhaps annually, across widespread areas of the County. This can result in an 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.

Severe Weather

Severe Weather was rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC.

Impact

SMMUSD and SMC

The impact varies in the school districts on the severity and duration of the severe weather. Numerous different results can change the impact from minor to devastation in damage to roads, buildings and property. The unique difference in impact between SMMUSD and SMC pertains to transportation. SMMUSD students are dependent on school buses to transport to and from school. SMC students are mostly self sufficient in transportation. The minor age of the SMMUSD students create a higher safety risk.

El Niňo

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

The County of Los Angeles established a special task force comprised of county department members to distribute sandbags and clear flood channels. In Monterey County, farmers and landowners along the Salinas River banded together to reduce flooding that caused $240 million in damages in 1995. They formed a coalition and spent $2 million to clean out vegetation, sandbars, and other flow impediments along 40 miles of the river, and increased water flow capacity by 33 percent. As a result, the Salinas River did not flood during the El Nino '98 Storms. In anticipation of El Nino-driven pounding surf and high tides, City and Orange County crews built, along the beach, a 10-foot high berm several hundred yards long to protect scores of beach-front homes in the City of Seal Beach.

The National Flood Insurance Program reported a surge in Californians purchasing flood insurance following the El Nino Community Preparedness Summit held in October, 1997. The number of policies went from a pre-summit total of 264,914 to 333, 753 by the end of November. This number climbed to 365,000 by the end of December according to FEMA.

Disasters have unique and defining characteristics. The El Nino '98 Storms are no exception. The most distinct characteristic of FEMA-1203-DR-CA has been the landslides, coastal erosion, and related earth movement problems brought on by rapidly recurring storms, which produce heavy rains, high winds, and large waves.

Overview of FEMA-1203-DR-CA

Disaster Declaration

On February 9, 1998, President Clinton signed a major disaster declaration that designated "El Nino '98, FEMA-1203-DR-CA". As a result of the Presidential declaration, section of the Robert T. Stafford Disaster Relief and Emergency Assistance Act were implemented, providing Individual Assistance and Public Assistance to the designated counties. The declaration also activated the Hazard Mitigation

Grant Program (HMGP), which is applicable to all counties in the State. After the initial declaration by President Clinton, 14 additional counties requested to receive a federal declaration, bringing the total number of designated counties to 41.

The 41 designated counties were: Alameda, Amador, Butte, Calaveras, Colusa, Contra Costa, Del Nor6te, Fresno, Glenn, Humboldt, Kern, Lake, **Los Angeles**, Marin, Mendocino, Merced, Monterey, Napa, Orange, Riverside, Sacramento, San Benito, San Bernardino, San Diego, San Francis o, San Joaquin, San Luis Obispo, San Mateo, Santa Ba5bara, Santa Clara, Santa Cruz, Solano, Sonoma, Stanislaus, Sutter, Tehema, Trinity, Tulare, Ventura, Yolo, Yuba.

El Nino '98

In the spring of 1997, Pacific Ocean temperatures along the equator from South America to Australia were rising above normal, changing wind patterns in the area. This is phenomenon known as El Nino. As part of the global impact of El Nino, heavy storms for 1997-1998 were predicted for the State of California.

In anticipation of a serious El Nino winter season, emergency services agencies throughout the State started making preparations. During summit convened on October 6, 1997, Governor Pete Wilson directed the State to take a series of actions in to prepare for the severe storms that were predicted to hit California as a result of El Nino. The Governor directed the Office of Emergency Services (OES) and the Department of Water Resources (DWR) to conduct a series of regional briefings over the next two months to assist local communities in their El Nino preparations. In October 1997, the first of six briefings for local and state agencies was held. FEMA held the "El Nino Community Preparedness Summit" in Santa Monica, on October 14, 1997

Agencies such as DWR and the Corps of Engineers accelerated efforts to complete projects and work, which began as a result of the prior year's disastrous flooding. Many local agencies accelerated repairs, cleaned storm channels, and implemented community education efforts, while the State issued environmental permits that allowed repair and mitigation work to move forward prior to the arrival of the storms. Although difficult to quantify, it is clear that without these and a multitude of other efforts, the devastation from the disaster would have been far greater.

About 170% of normal precipitation was experienced in most areas, with several locations receiving 300% or more above normal. Rainstorms occurred continuously in February, ranging in duration from 1 to 3 days, with only a day of rest between cycles. The season's most severe storm occurred on February 2nd, and a series of storms continued until February 24, 1998. A strong jet stream was present across the Pacific during this time and this colder air mass also increased rain and snow. February rains were three times normal, and the mountain snow pack rose from 15% to 185%. The pattern was similar to the winter of 1982-83, the most serious past El Nino year. The El Nino '98 Storms were of average temperature --unlike those of 1997, which were warmer, resulting in rainfall at higher elevations.

Description of Damage and Impact

Damage occurred almost as soon as the first heavy rains began in November, 1997. In Orange County, the damage became serious enough for a local disaster declaration on December 6, 1997. This was followed by a gubernatorial disaster declaration on December 10, 1997.

Casualties included 17 confirmed deaths and 29 confirmed injuries. The total amount of residential damage was estimated at over $120 million. Roads, utilities, and levees were also damaged. As of April 29, 1998, the Disaster Field Office (DFO) estimated damages as follows: 91 homes have been destroyed, 2,303 homes suffered major damages, and 4,252 homes incurred minor damage.

According to the California Coastal Commission, *Storm Summary Report for Coastal California, March 10, 1998,* the El Nino '98 Storms caused extensive damage along Coastal California. In many cases, coastal bluff and mountain soils lost stability due to saturation from copious precipitation and large waves. High river levels caused flooding of several low elevation areas. There was a great deal of beach erosion in Los Angeles, Orange, and San Mateo Counties, as well as other parts of California. Storm waves damaged many low-lying oceanfront structures. The Coastal Commission issued approximately 75 emergency coastal permits, mostly for rip rap and seawall repairs to protect residential structures.

Impacts to Individuals

By April 28, 1998, FEMA's Human Services Division had received over 70,125 tele-registrations for FEMA disaster assistance. The Disaster Housing Program had received a total of 46,730 applications, and had provided $20.6 million in assistance. As of April 15th the Small Business Administration (SBA) had issued 31,509 home and personal property loan applications and had approved more than $16 million in low interest loans. In addition, the SBA had issued 9,699 business loan applications and approved $6,504,400 in business loan funds. The Individual and Family Grant Program (IFGP) had received 37,093 requests as of April 28th. For serious, unmet needs beyond the maximum IFGP award, the State Supplemental Grant (SSG) could provide up to an additional $10,000, and had awarded 17 grants for an additional $82,663 in aid to individuals. The Public Assistance (Infrastructure) Program had received 269 Damage Survey Reports (DSRs) totaling $26,582,560 as of April 28, 1998. According to the preliminary damage assessment, damage to local government facilities was estimated at $300 million.

Shelters

The El Nino '98 Storms created a need to feed and shelter thousands of people. The American Red Cross (ARC), members of the National Volunteer Organizations Active in Disaster (NVOAD), and numerous other voluntary agencies, are usually the first to respond to the needs of disaster victims. The Red Cross provided housing for 5,112 people at 91 shelter locations, more than 140,000 meals were served, and financial assistance was extended to more than 2,300 households. The Red Cross relief efforts for the El Nino winter storms exceeded $4.6 million.

Levees

Unlike the flooding in the previous year (FEMA-1155-DR-CA), California Winter Storms of 1997), there were less widespread floods and levee problems. Due in part top the lower temperatures, the duration of rains, and pre-storm repair efforts to shore-up levees at risk, there were only a few levee breaks and seepage. According to DWR, The Sacramento River was not strained to capacity. The San Joaquin River briefly approached flood stage at the Vernalis Gage, but did not exceed it. Many of the areas that flooded were predictable, such as Rio Linda in Sacramento County and the residential areas along the Pajaro River in Monterey County. The area around Clear Lake in Lake County repeated its flooding history, and set a record for the stage height. The Russian River at Guerneville was above flood stage, as was the Petaluma River.

Landslides

Landslides and debris flows had a greater impact during this disaster than in the federal disasters of 1995 and 1997. The severity of the problems ranged from the catastrophic losses in the Rio Nido community of Sonoma County, to small erosion problems with minor impact. Landslides and erosion also caused residential damage and destruction in Alameda County, Humboldt County, Los Angeles County, San Mateo County, San Francisco County, Santa Cruz County, Ventura County, and various other sites within the state.

Geological Discussion

The frequent storms that occurred in February 1998 saturated soils and triggered numerous debris flows and landslides, resulting in severe damage throughout river valleys and coastal areas. Eroding cliffs jeopardized homes, and debris flows forced many residents to evacuate their homes. Such headline grabbing events focused attention on the geologic problems produced by the wet season. It should be noted, however, that deep-seated landslide movements could continue after the heavy rains have stopped.

Soil and rock that comprises hill slopes will eventually move downhill. Some of this material will move grain-by-grain thorough erosion and soil creep, and some will move as larger slabs or liquefied masses, commonly called landslides and mudslides. Geologists generally classify landslides on their shape, rate (speed) of movement, type of motion, and material properties. In most classification schemes, there are three distinct types of movement: flow (e.g. debris flows and mudflows); sliding along a discrete plane or failure (e.g. debris slide); and falling (e.g. rock falls and avalanches).

Landslides can be small, involving only a few cubic yards of material, or large, involving more than a square mile of land. Some landslides are shallow, only a few feet deep, while others can be hundreds of feet deep. Landslides can be slow, and move only a few inches a year. It can also be fast and move at tens to hundred of miles per hour.

While most hill slopes are marginally stable under dry conditions, the addition of water from rainfall, snowmelt, or human activities (e.g. watering lawns) can radically alter the character of the soil and weathered rock and lessen the stability of slopes. Generally, all other conditions being equal, if groundwater is at or near the ground surface, there is a great probability that a landslide or debris flow will occur.

Another major factor that may trigger landslides is sudden changes in the shape of the slope. Slope changes that may trigger landslides include, but are not limited to, man-made cuts and fills, undermining of slopes by stream erosion or formation of gullies, or undermining and overloading of slopes due to landslide movement on adjacent land. In fact, landslide movement in one part of a hill slope can radically affect the stability of adjacent slopes. Events at Rio Nido in Sonoma County illustrate how complex the changes in stability can be. In simplified terms, the Rio Nido landslide began when a block of soil and rock, high on a ridge, rotated down and out on the slope. This movement pushed a bulge of material onto the existing steep slope at the toe of the landslide. Fissures opened at both the top of the rotational block and within the toe of the landslide. The rotational movement of the landslide also undermines up-slope areas (decreasing stability), changing the groundwater flow patterns (increasing stability in parts of the slide while decreasing stability in other). Because the toe of the landslide was no longer supported by the surrounding slope (the slope became overly steep), the saturated outside edge failed by toppling and breaking apart. This loose material then mobilized as debris flow down a stream channel, picking up additional debris, including sediment and trees, as it flowed toward the houses on the canyon flow below. Immediate concerns were that the landslide mass would continue to move high on the slope, and as it did, the entire mass would break apart and fail as a massive debris flow that would inundate a much larger down slope area. Currently, the rotational component of the Rio Nido landslide has not shifted since monitoring equipment was installed two weeks after the failure began.

Hillsides may also be more vulnerable to debris flows following wildfires. Removal of vegetation generally makes hillsides more susceptible to erosion and landslides. After a forest fire there is reduction in the amount of vegetation on the hillsides to hold the soil in place. Also, the roots decay over a period of years following the fire. This results in an increased landslide hazard for 3 to 5 years following a large fire. In 1997, Southern California had 27 wildfires greater than 300 acres. At least 22 of those sites had some erosion damage in 1987, and it came in the form of debris flows and minor flooding.

There is evidence to suggest that most landslides and debris flows occur where they have happened in the past. For example, the Rio Nido landslide is next to an existing landslide deposit identified on a CA Division of Mines and Geology (DMG) map.

Though landslides are fairly common in California's hillside areas, there is considerable pressure to construct new homes at these locations. Some communities require site-specific investigations prior to permitting development. Engineers attempt to stabilize slopes by providing drainage, flattening slopes, and filing-in valleys. Sometimes, these modified slopes and fills require maintenance and while many of these modified slopes could last decades, some failures occur. This is what happened to houses in Laguna Niguel, Orange County, which were built on an engineered slope that had shown signs of distress for three years.

Just as there is pressure to develop hill slope areas, the beautiful ocean views from sea cliffs make them desirable places to live. During the recent disaster, accelerated cliff erosion in Pacifica resulted from slightly higher than normal seasonal ground water infiltration. When the ground becomes saturated, wave action can more easily remove materials that have fallen to the bottom of the cliffs, temporarily accelerating cliff retreat in the areas up slope. The rocks in these particular cliffs are highly fractured and nonresistant. They include sandstone, shale, and metamorphic rocks that are prone to rapid erosion during the rainy season. Erosion usually has occurred episodically, not continually at the same time. This year the cliffs locally eroded as much as 10 feet, compared to the frequently noted annual averages of 3 to 4 inches.

Flood

Flood was rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC.

Impact

SMMUSD and SMC

SMMUSD and SMC share the same impact for flooding. Flooding can be caused by severe weather or a tsunami. SMMUSD has more concern due to the number of campuses, which are at risk because of their locations within a mile of the Pacific coastline.

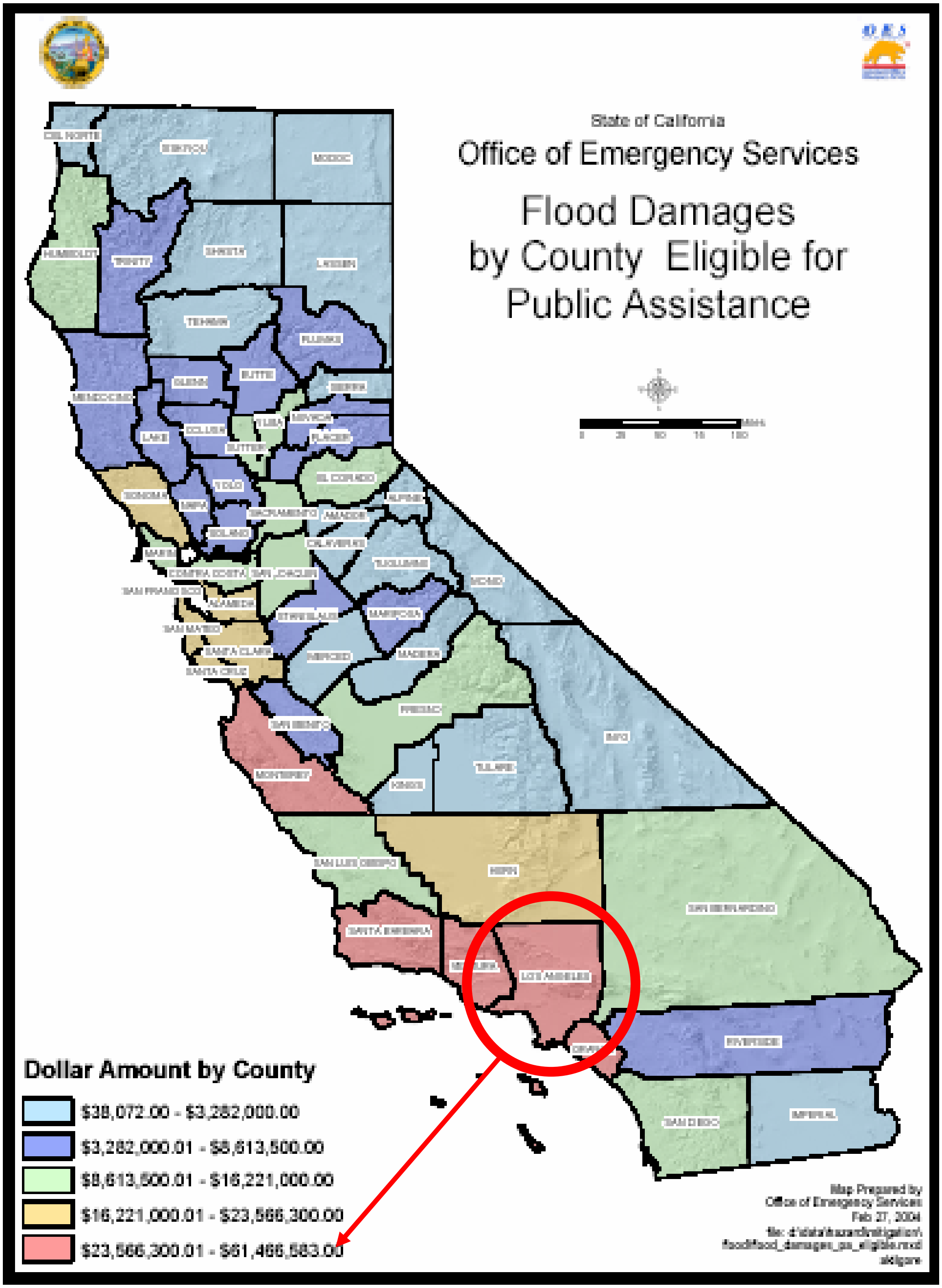
Flood Loss Information

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.


State of California
Office of Emergency Services
Flood Damages
by County Eligible for
Public Assistance
Dollar Amount by County
$38,072.00 - $3,282,000.00
$3,282,000.01 - $8,613,500.00
$8,613,500.01 - $16,221,000.00
$16,221,000.01 - $23,566,300.00
$23,566,300.01 - $61,466,583.00
Map Prepared by
Office of Emergency Services
Feb 27, 2004

Types of Flooding in California

Flood Type	Problems
Alluvial Fan	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 course material. The deposited material becomes increasingly fine as the gradient decreases and the material, mainly gravels, sand and mud, spreads. 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.
Coastal	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.
Flash	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. 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. 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.
Fluvial	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. 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.
Lake	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.
Levee	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. 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.
Mudslides	Mud floods and mudflows cause several types of flood damage that are not characteristic of clear-water flooding. These include: • 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. 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.
Riverine	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.

Seiche and Tsunami	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 creased. Tsunamis frequently arrive in a series of spaced intervals.

Local Flood Information

Federal Flood Disaster Declarations (Los Angeles County and adjacent jurisdictions)

County	Total Pop in FIRM Zone	Pop in Zone A - 100YR	Population of County	# PA Applicants	PA Amt Eligible	% PA Amt Eligible	% IA Damage Locations
LOS ANGELES	**390,305**	**98,371**	**9,519,338**	**2,908**	**$61,466,583**	**10.35**	**45.36**
ORANGE	1,384,403	428,779	2,846,289	1,391	$32,167,618	5.42	2.39
RIVERSIDE	295,081	72,628	1,545,387	615	$7,846,555	1.32	1.00
SAN BERNARDINO	196,945	61,247	1,709,434	951	$10,734,165	1.81	1.63
SAN DIEGO	181,757	82,807	2,813,833	798	$11,163,308	1.88	1.54
SANTA BARBARA	54,731	24,772	399,347	1,465	$36,227,678	6.10	1.82
VENTURA	187,179	56,113	753,197	1,120	$33,556,411	5.65	1.38
STATEWIDE Nonspecific	**5,227,897**	**1,973,712**	**33,871,648**	**30,713**	**$593,611,817**	**100.00%**	**100.00%**

Floodplain Management Plan for Repetitive Loss Properties

Repetitive Loss Properties (RLPs) are most susceptible to flood damages; therefore, they have been the focus of flood hazard mitigation programs. Unlike a countywide program, the Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner's interest. It also requires public involvement processes unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. A repetitive loss property is one for which two or more claims of $1,000 or more have been paid by the National Flood Insurance Program (NFIP) within any given ten-year period.

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.

Los Angeles County 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).

On March 31, 1992, the LA County Board of Supervisors adopted the "Repetitive Loss Plan for the National Flood Insurance Program CRS", which was approved by FEMA for CRS Activity. To continue program participation, the County is required to prepare an annual update of activities in the Repetitive Loss Plan that reduce the number of and/or mitigate the risk to properties with multiple flood damage claims.

CRS Application and Certification

Community application for the CRS is voluntary. Communities apply for a CRS classification and are given credit points that reflect the impact of their activities on reducing flood losses, improving the insurance rating, and promoting the awareness of flood insurance. The CRS encourages programs and projects that preserve or restore the natural state of floodplains and protect these functions. The CRS also encourage communities to coordinate their flood loss reduction programs with habitat Conservation Plans and other public and private activities that preserve and protect natural and beneficial floodplain functions.

Depending on the credit points received during CRS certification, a community can fall into one of ten classes: Class 1 requires the most credit points and gives the largest premium reduction, while Class 10 receives no premium reduction. The County's current CRS classification is 8. Preparation of site-specific FMPs will help communities to retain or improve the CRS classification.

FMP Procedure and Process

The FMP planning process involves review, research, investigation, discussion, interview, and consensus building. It includes receiving input from all parties involved and collaborating with existing and future regional programs that relate to flood hazard mitigation such as land use plans, capital improvement plans, neighborhood redevelopment plans, floodplain ordinances, and environmental preservation/ enhancement plans. The FMP for RLPs intends to address the site-specific problems and possible resolutions, under the authority of individual homeowners and/or their homeowner associations.

CRS credit is provided for preparing, adopting, implementing, evaluating, and updating a comprehensive floodplain management plan. Credit is not based on the activities the FMP recommends, but rather on the process that is used to prepare the FMP.

FMP Committee

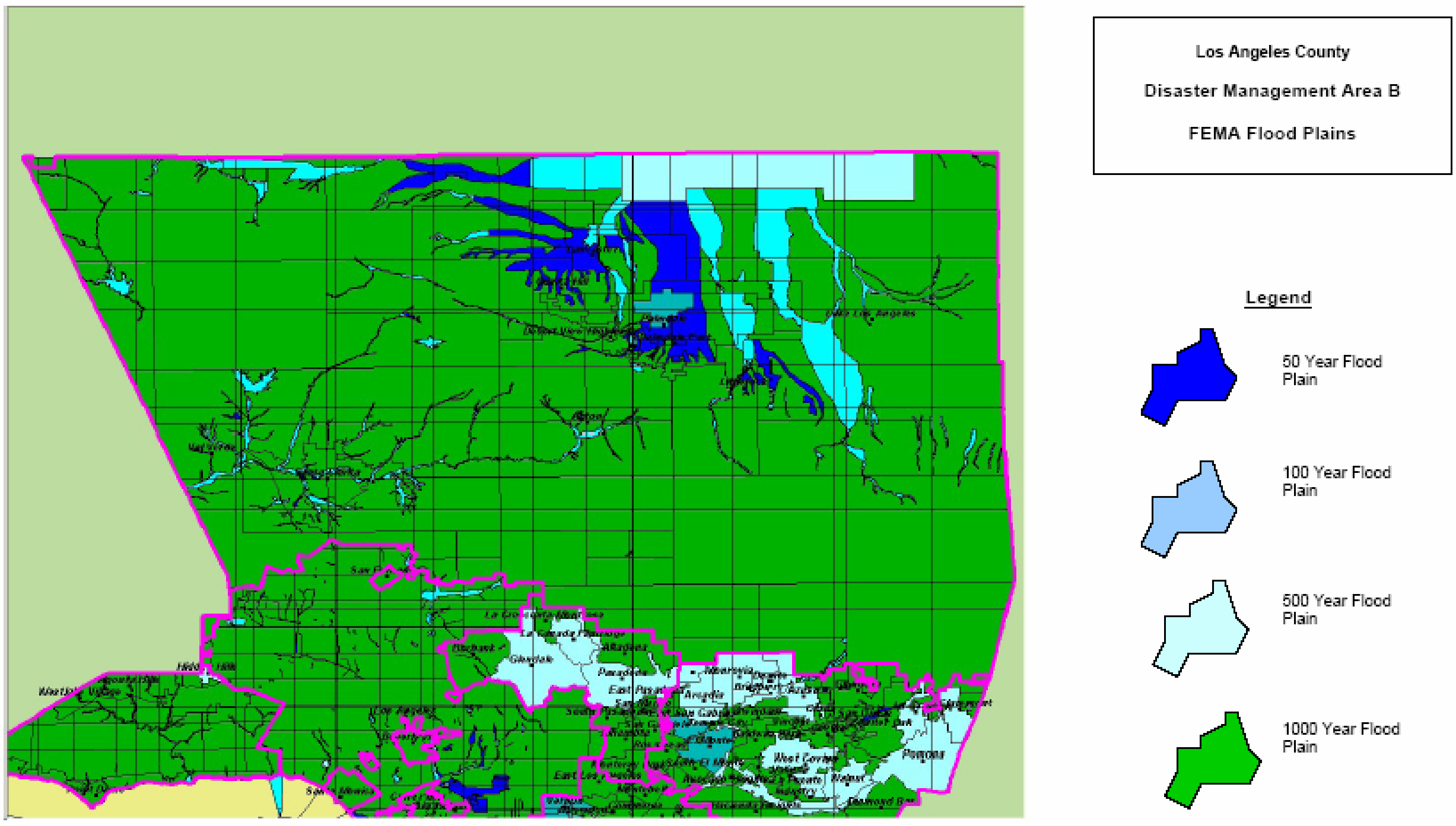
The development, modification, and revision of the FMP are accomplished through the direction and oversight of an FMP Committee. FEMA places a high priority on the establishment of a committee that consists of residents, businesses, and property owners that are most affected by flood hazards. The County has maximized the involvement of the public throughout the FMP process.

Repetitive Loss Properties (RLPs) in Los Angeles County

Los Angeles County has a total of 28 repetitive loss properties. Nineteen properties are located in the unincorporated areas of Malibu Lake, and nine properties are within the unincorporated areas of Santa Monica Mountains, San Gabriel Mountains and Quartz hills (4 in Santa Monica Mountains, 3 in San Gabriel Mountains, and 2 in Quarts Hill).

Through the direction and oversight of FMP Committees, site-specific Floodplain Management Plans for these Repetitive Loss Properties are updated on an annual basis to meet CRS certification and NFIP participation requirements. These plans follow the general requirements of the National Floodplain Insurance Program (NFIP) and the specific procedures outlined in the Community Ratings System (CRS) Coordinator's Manual.

(See: (1) "Floodplain Management Plan for Repetitive Loss Properties: Los Angeles County, Santa Monica Mountains, San Gabriel Mountains, Quartz Hills." September, 2001. (2) "Floodplain Management Plan for Repetitive Loss Properties: Los Angeles County, Malibu Lake Area." September, 2001).


Los Angeles County
Disaster Management Area B
FEMA Flood Plains
Legend
50 Year Flood Plain
100 Year Flood Plain
500 Year Flood Plain
1000 Year Flood Plain

Drought

Drought was rated a MODERATE PRIORITY HAZARD in SMMMUSD & SMC.

Impact

SMMUSD and SMC

The impact of drought varies from minimal to moderate depending on the drought cycles.

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

Definition of Drought

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

Agricultural Definition of Drought

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

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

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

Deficient Topsoil Moisture

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

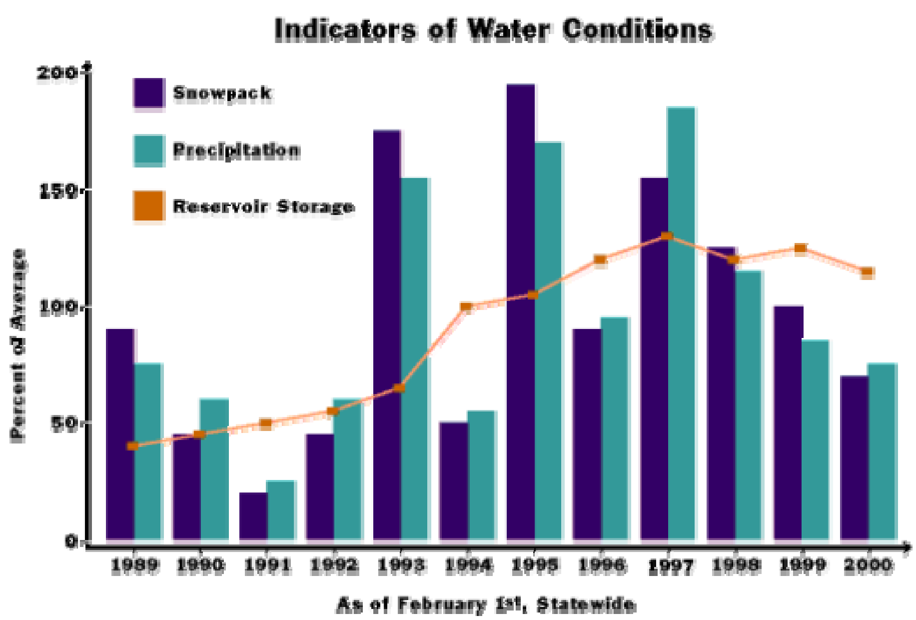
Concept of Drought

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

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

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

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

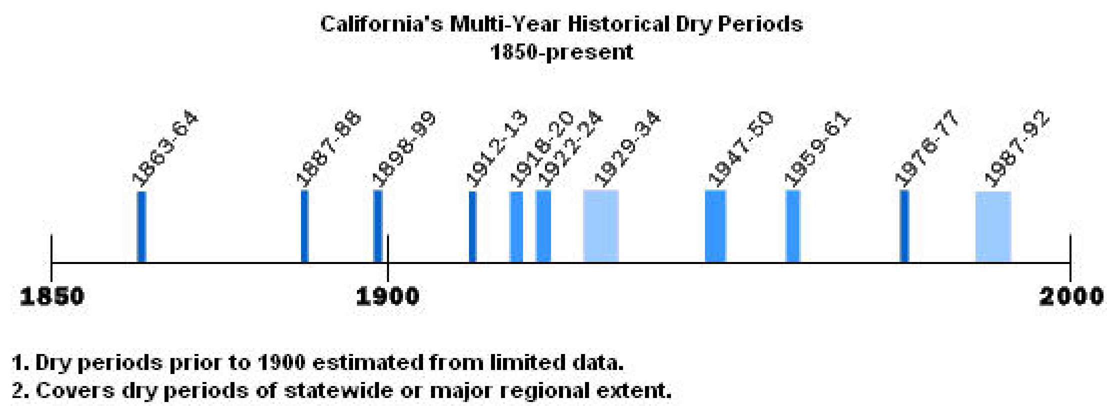


Drought is a gradual phenomenon. Although droughts are sometimes characterized as emergencies, they differ from typical emergency events. Most natural disasters, such as floods or forest fires, occur relatively rapidly and afford little time for preparing for disaster response. Droughts occur slowly, over a multiyear period. There is no universal definition of when a drought begins or ends. Impacts of drought are typically felt first by those most reliant on annual rainfall -- ranchers engaged in dry land grazing, rural residents relying on wells in low-yield rock formations, or small water systems lacking a reliable source. Criteria used to identify statewide drought conditions do not address these localized impacts. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline.

Past California Droughts

Droughts exceeding three years are relatively rare in Northern California, the source of much of the State's developed water supply. The 1929-34 drought established the criteria commonly used in designing storage capacity and yield of large Northern California reservoirs. The table below compares the 1929-34 drought in the Sacramento and San Joaquin Valleys to the 1976-77 and 1987-92 droughts. The driest single year of California's measured hydrologic record was 1977. California's most recent multi-year drought was 1987-92.

Measured hydrologic data for droughts prior to 1900 are minimal. Multi-year dry periods in the second half of the 19th century can be qualitatively identified from the limited records available combined with historical accounts, as illustrated in the figure below, but the severity of the dry periods cannot be directly quantified.



One approach to supplementing California's limited period of measured data is to statistically reconstruct data through the study of tree rings (called dendrochronology). Information on the thickness of annual growth rings can be used to infer the wetness of the season. Site-specific approaches to supplementing the historical record can include age-dating dryland plant remains now submerged in place by rising water levels, or sediment and pollen studies. For example, a 1994 study of relict tree stumps rooted in present-day lakes, rivers, and marshes suggested that California sustained two epic drought periods, extending over more than three centuries. The first epic drought lasted more than two centuries before the year 1112; the second drought lasted more than 140 years before 1350. In this study, the researcher used drowned tree stumps rooted in Mono Lake, Tenaya Lake, West Walker River, and Osgood Swamp in the central Sierra Nevada. These investigations indicate that California has been subject to droughts more severe and more prolonged than those witnessed in the brief historical record.

The Long-term Climatic Viewpoint

The historical record of California hydrology is brief in comparison to geologically modern climatic conditions. The following sampling of changes in climatic conditions over time helps put California's twentieth century droughts into perspective. Most of the dates shown below are necessarily approximations. Not only must the climatic conditions be inferred from indirect evidence, but the onset or extent of changed conditions may vary with geographic location. Readers interested in the subject of paleo-climatology are encouraged to seek out the extensive body of popular and scientific literature on this subject.

Past California Droughts

The historical record of California hydrology is brief in comparison to the time period of geologically modern climatic conditions. The following samplings of changes in climatic and hydrologic conditions help put California's twentieth century droughts into perspective, by illustrating the variability of possible conditions. Most of the dates shown below are necessarily approximations, since the dates must be inferred from indirect sources.

11,000 years before present

Beginning of Holocene Epoch- Recent time, the time since the end of the last major glacial epoch

6,000 years before present

Approximate time when trees were growing in areas now submerged by Lake Tahoe. Lake levels were lower then, suggesting a drier climate.

900-1300 A.D.(approximate)

The Medieval Warm Period, a time of warmer global average temperatures. The Arctic ice pack receded, allowing Norse settlement of Greenland and Iceland. The Anasazi civilization in the Southwest flourished, its irrigation systems supported by monsoonal rains.

1300-1800 A.D. (approximate)

The Little Ice Age, a time of colder average temperatures. Norse colonies in Greenland failed near the start of the time period, as conditions became too cold to support agriculture and livestock grazing. The Anasazi culture began to decline about 1300 and had vanished by 1600, attributed in part to drought conditions that made agriculture infeasible.

Mid - 1500s A.D.

Severe, sustained drought throughout much of the continental U.S., according to dendro-chronology. Drought suggested as a contributing factor in the failure of European colonies at Parris Island, South Carolina and Roanoke Island, North Carolina.

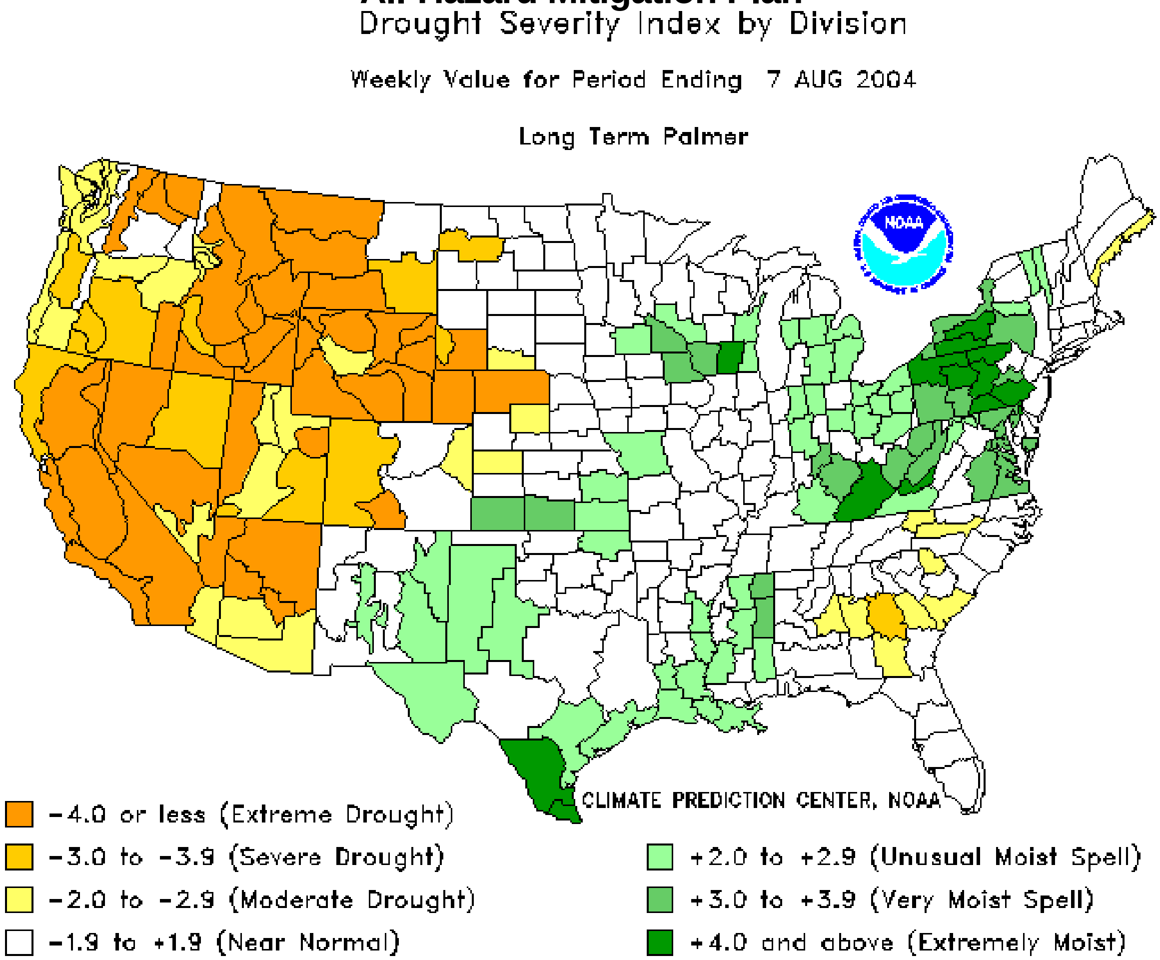
1850s A.D.

Sporadic measurements of California precipitation began.

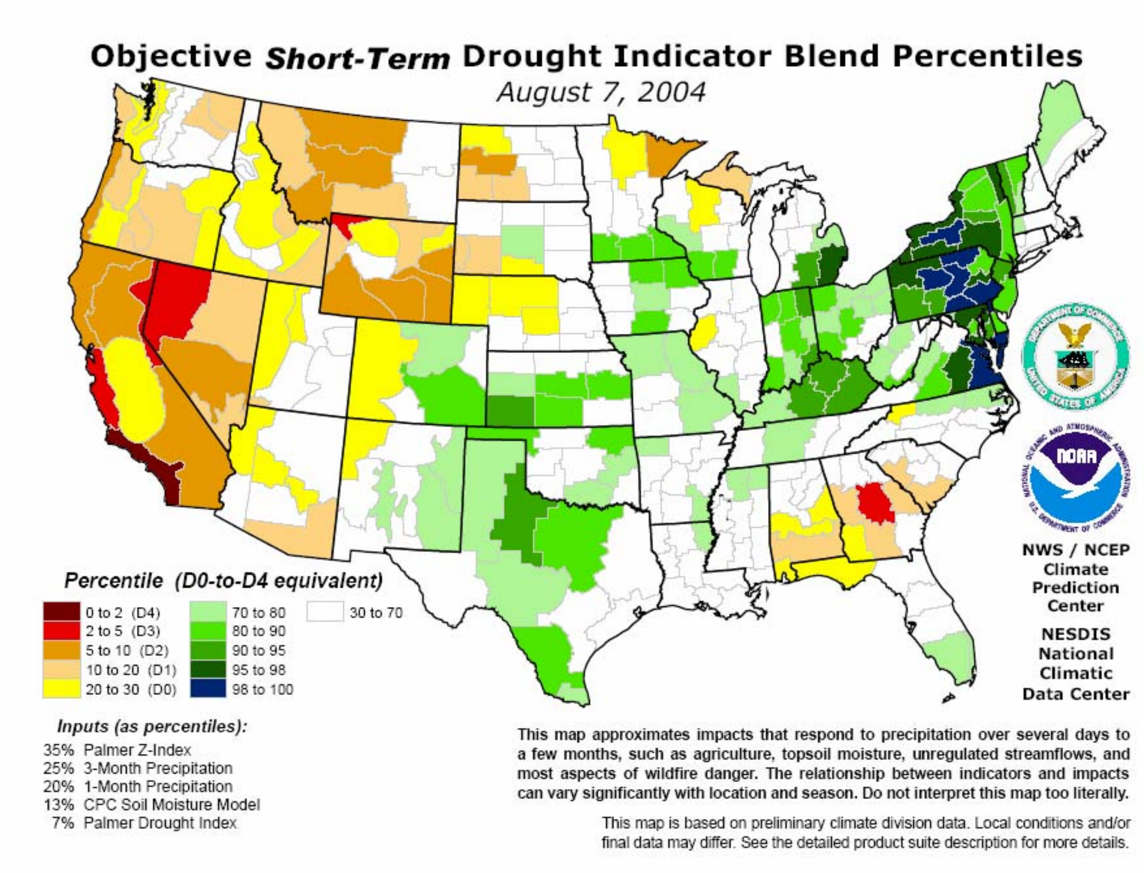
1890s A.D.

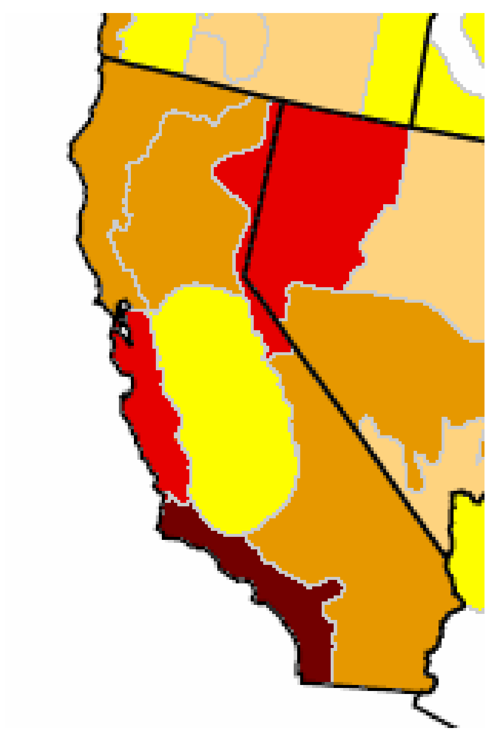
Long-term stream flow measurements began at a few California locations

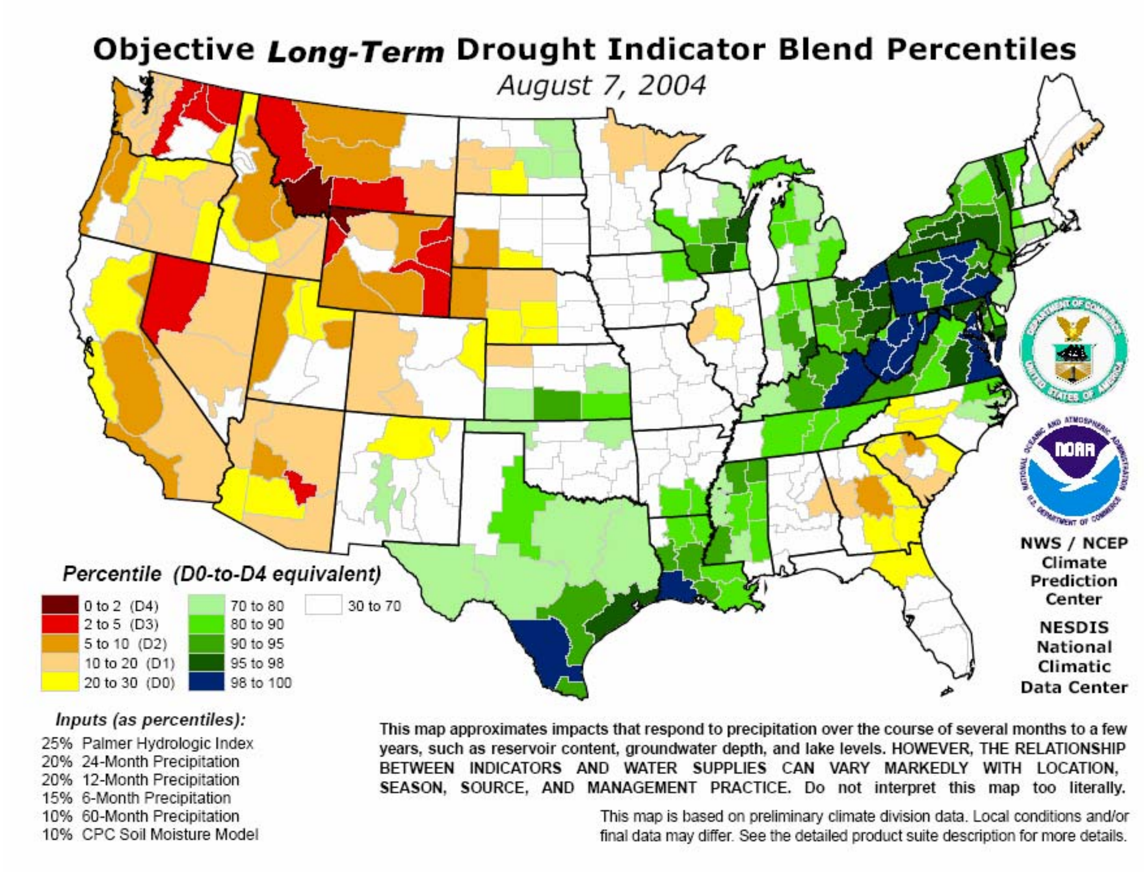
The image below is a the most current snapshot of drought conditions across the U.S. It is provided by NOAA's Climate Prediction Center.

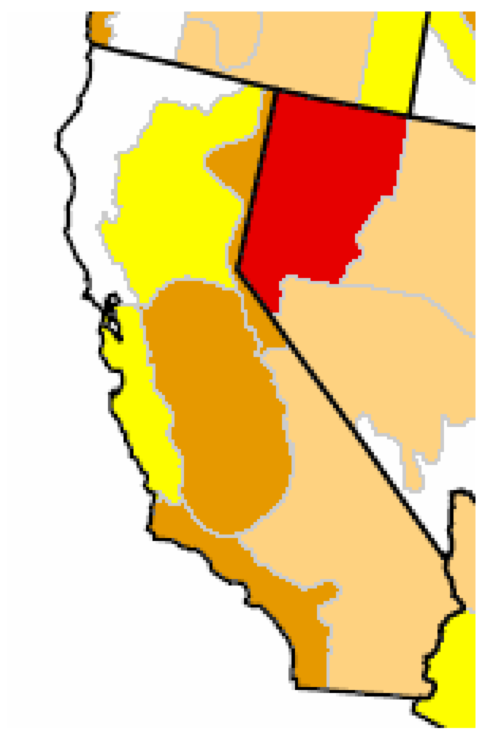

Drought Severity Index by Division
Weekly Value for Period Ending 7 AUG 2004
Long Term Palmer
NOAA
CLIMATE PREDICTION CENTER, NOAA
-4.0 or less (Extreme Drought)
-3.0 to -3.9 (Severe Drought)
-2.0 to -2.9 (Moderate Drought)
-1.9 to +1.9 (Near Normal)
+2.0 to +2.9 (Unusual Moist Spell)
+3.0 to +3.9 (Very Moist Spell)
+4.0 and above (Extremely Moist)

Drought Monitor









The Drought Monitor was introduced as an operational weekly product in 1999 to provide an overview of conditions averaged across a broad array of time scales and impact indicators, leaning toward those that seem most relevant to observed impacts. This approach has led to an unprecedented degree of cooperation and coordination among a variety of disparate Federal, state, and local government agencies, in addition to many interested members of the academic and private research communities. The result has boiled the complex issues of drought and drought-related impact assessment down to a single, simple, visually-intuitive summary of conditions, which has replaced the uncoordinated, disparate, and often contradictory assortment of opinions, and data that formerly characterized responses to requests for drought information.

While this approach has been successful and well-received overall, there are situations where it can be substantially misleading. Drought and its related impacts operate on a variety of time scales, and the Drought Monitor depiction (which usually portrays some semblance of an "average" condition across all time scales and impact types) cannot accurately confer information when conditions and impacts dependent on one time scale differ dramatically from those related to a much longer (or shorter) time scale. Hypothetically, a region, which has received consistently and substantially inadequate precipitation over the course of several years, might experience a day, or a few days, or even a few weeks of heavy rain. What is the overall drought status after this occurs? The Drought Monitor would likely depict a substantial improvement in conditions (in deference to major short-term relief) but maintain some indication of continuing drought (in deference to the multi-year dryness, which likely changed only slightly in response to the heavy rains). This is all that a single-image depiction could possibly do. In reality, however, the degree to which drought-related impacts would continue to be a concern would depend on what time scale a given class of impacts responds to. Obviously, in this situation, wildfire danger would decline sharply, at least for the immediate future. Also, unregulated stream flows would swell from runoff and topsoil moisture would be substantially recharged if the precipitation lasted long enough, thereby providing at least a temporary respite for non-irrigated agriculture. On the other hand, reservoir stores might increase only slightly, having been depleted by a few years of precipitation failing to keep up with demand, and ground water levels and/or well water depth, if they were low, might be barely (or at best belatedly) affected by the heavy short-term rains, since much of the water was likely dispersed by swollen streams or absorbed by parched topsoil.

To confer information about drought status on different time scales to those users that need such information, two new experimental products are being made public which will serve as timescale-specific supplements to the Drought Monitor at a basic level. Both assess conditions based on a blend of several drought indicators, and are depicted relative to the local historic record.

The ***Short-Term Blend*** approximates drought-related impacts that respond to precipitation (and secondarily other factors) on time scales ranging from a few days to a few months, such as wildfire danger, non-irrigated agriculture, topsoil moisture, range and pasture conditions, and unregulated stream flows.

The ***Long-Term Blend*** approximates drought-related impacts that respond to precipitation on time scales ranging from several months to a few years, such as reservoir stores, irrigated agriculture, groundwater levels, and well water depth.

It should be noted that the relationship between indicators and impacts varies, sometimes markedly, with location and season. This is particularly true of water supplies, which are additionally dependent on the source (or sources) tapped, management practices, and legal mandates. Exercise caution when attempting to relate these maps to specific impact implications for a particular location and time of year. The blend-to-impact correlation is not always direct, and will vary spatially and temporally.

The following bullets describe the composition of these experimental blends:

- These products are generated using the Climate Prediction Center's real-time daily & weekly climate division data, and the National Climatic Data Center's monthly climate division data archive, back to 1932.

- The indices used in the blends and their weights are as follows:

  SHORT-TERM: 35% Palmer Z-Index; 25% 3-Month Precipitation; 20% 1-Month Precipitation; 13% Climate Prediction Center Soil Moisture Model; and 7% Palmer (Modified) Drought Index.

  LONG-TERM: 25% Palmer Hydrologic Drought Index; 20% 12-Month Precipitation; 20% 24-Month Precipitation; 15% 6-Month Precipitation; 10% 60-Month Precipitation; 10% Climate Prediction Center Soil Moisture Model.

- All parameters are first rendered as percentiles with respect to 1932-2000 data using a percent rank method. Most parameters are ranked relative to the National Climatic Data Center's historic climate division data for the current month, except for the Z-Index, which is rendered relative to all months on record (this introduces evaporative seasonality into the short-term blend).

- For each blend, the averages of the percentile inputs are calculated, with each input weighted as described above. This yields a "weighted raw average" of the individual component percentiles for each blend. Then, each raw average is compared to its historic (1932 - 2000) distribution (these have been retrospectively generated from the climate division data archive). The real-time data are compared to ALL retrospective months, not just the current month, since the individual percentile inputs were each generated (for all but the Z-Index) relative to the history of the current month only. This allows for a more confident estimation of the percentile by using more data to define the historical array (12 times as many as if we assessed the blends' raw weighted averages relative to the current month only).

- The precipitation percentile inputs are generated in a somewhat unusual way, combining month-to-date numbers from Climate Prediction Center with the National Climatic Data Center's monthly totals for prior months. As daily precipitation totals for the current month are ingested into the x-month totals, an identical proportion of the monthly precipitation that fell during the first month in the x-month period is eliminated (e.g., to determine a 6-month precipitation total, from which a percentile will be calculated and incorporated into the blend, for the period ending September 21, 2002, we add the daily preliminary precipitation amounts for September 1-21 to the 6-month total for March-August 2002, then subtract 21/30 of the March total from the result, since 21/30 of September have been added). This process (a) emulates natural cycles by adding precipitation as it falls but eliminating early-period precipitation evenly over the course of a month; and (b) ensures that the data utilized in real time are as consistent with the historical array as possible. The near-real-time climate division precipitation data are biased in some areas relative to the final NCDC monthly archive, with wet near-real-time biases in the central and northern Rockies particularly extreme. The data are adjusted where appropriate at the end of each month, but the biases remain in the data for all precipitation time scales since the end of the previous calendar month. In addition, the biased near-real-time data are used in the Palmer Drought Index, the Palmer Hydrologic Drought Index, the Z-Index, and CPC's modeled soil moisture data, and can remain in those calculations for several weeks. These blends may be subject to change in the future.

Tsunami

Tsunami (Seismic Sea Wave) was rated a LOW PRIORITY HAZARD in SMMUSD & SMC.

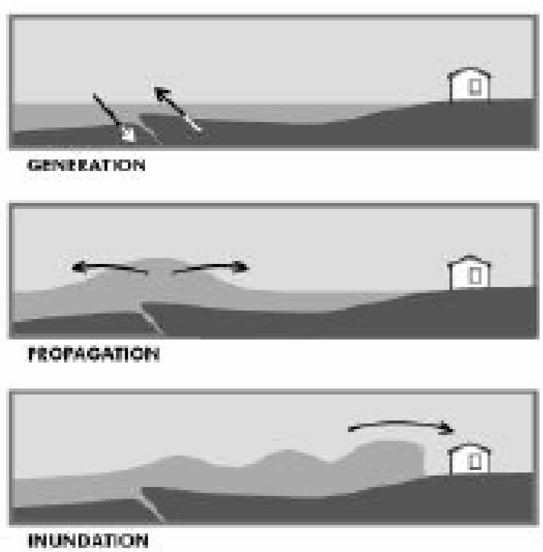
Impact

SMMUSD and SMC

All the school facilities, which are located inland, are at risk for a Tsunami event. The potential for loss of facilities and lives are high. The chance of a Tsunami occurrence are low. The City and County of Los Angeles have Tsunami warning mechanisms, which lower the risk of exposure.

Tsunami Definition

A tsunami is a series of long waves generated by any sudden displacement of a large volume of water. Tsunamis are triggered by submarine earthquakes, submarine volcanic eruptions, underwater landslides or slumps of large volumes of earth, meteor impacts, and even onshore slope failures that fall into the ocean or a bay. Tsunami waves can propagate as a series of long waves across entire ocean basins. The hazard can last for many hours as the tsunami passes, and waves may resonate in some harbors and bays for days after the initial attack. For example, tsunamis from the 1960 offshore Chile event were recorded for more than one week in some locations.

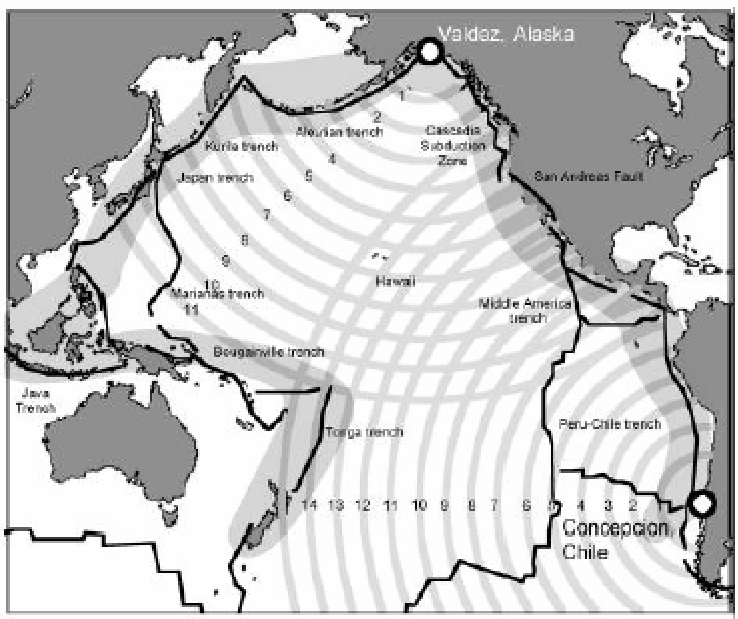


A tsunami is a series of deep, long waves
Generated by a sudden displacement of a large volume of water.

Seiches (or harbor oscillations) are a related hazard for enclosed bays, inlets, and lakes. Alaska and parts of Washington and British Columbia, in particular, have numerous communities vulnerable to such events. These destructive tsunami-like waves can be generated by earthquake motions, subsidence or uplift of large blocks of land, submarine and onshore landslides, sediment failures, and volcanic eruptions. Large tidal bores, strong currents, and the interaction of ocean swells and surf outside of bays and inlets may amplify the waves. The strong currents associated with these events may be more damaging than inundation by waves.

Source Zones

Tsunamis are associated primarily with seismic activity. The Pacific "Ring of Fire," one of the most active seismic features on earth, circles the Pacific Ocean from the southern tip of Chile, north along the west coasts of both South and North America, turning west along the Aleutian Islands arc of Alaska, and south through Japan, the Philippines, and the eastern Indo-Pacific region. Occasionally, tsunamis generated within this region threaten almost every island and coastal settlement in the Pacific Rim, including those in the five Pacific states: Alaska, California, Hawaii, Oregon, and Washington.



The Pacific "Ring of Fire" is the most active seismic feature on earth. Tsunami waves triggered by seismic activity can travel across the Pacific Ocean at up to 500 miles per hour, striking distant coastal areas in a matter of hours. The figure shows the estimated number of hours for tsunami-generated waves to travel across the Pacific Ocean from Alaska and Chile, respectively.

While not on the Ring of Fire, Hawaii sits in the center of a tectonic hot spot. Earthquakes and large landslides along the flanks of Hawaii, associated with the injection of magma into volcanoes' "plumbing systems", have generated tsunamis. In some areas, the risk of tsunamis from landslides may be greater than that posed by offshore earthquakes. Some locations, like parts of Alaska and Hawaii, may be stricken by multiple tsunamis from different sources such as volcanic eruptions, submarine earthquakes, and landslides, which may occur at the same time, greatly compounding the hazard.

Local and Distant Sources of Tsunamis

Tsunamis are typically classified as either local or distant. These two types of tsunamis have different implications for comprehensive planning; zoning; building siting, design, and construction activities; and evacuation warning. For example, local tsunamis likely will follow associated earthquake ground shaking and possibly ground failures that may produce additional damage. Evacuation will have to be nearly instantaneous when responding to local tsunamis, but assuming effective warning systems exist, many hours may be available to evacuate people from exposed areas before distantly-generated tsunami waves arrive.

Tsunamis from Local Sources

Tsunamis from local sources usually result from earthquakes occurring off nearby coasts. In the Pacific Northwest, including Alaska, these typically involve large subduction earthquakes in the Cascadia Subduction Zone or the Alaskan-Aleutian Subduction Zone. The Cascadia zone, where the Farallon (or Gorda or Juan de Fuca) Plate is sliding beneath the North American Plate, lies approximately 60 miles (100 kilometers) seaward of Cape Mendocino, California, and extends north along the coasts of Oregon, Washington, and British Columbia to the Queen Charlotte Islands. The Alaskan-Aleutian zone, where the Pacific Plate is sliding beneath the North American Plate, extends from southeastern Alaska to the westernmost tip of the Aleutian Islands.

Along active subduction coasts, tsunamis may also be generated by large landslides, both submarine and above water, into coastal waters (e.g., Lituya Bay, Alaska), and by volcanic activity (e.g., Krakatoa, Indonesia), especially along the Aleutian volcanic island chain.

In Hawaii, two of the largest tsunamis in the historic record (1868 and 1975) were caused by normal-fault earthquakes on the flank of the island. A few other much smaller Hawaii tsunamis may have been caused by onshore or submarine landslides. Volcanic activity is associated with these events such as the eruptions of Kilauea in 1975. Although explosive volcanic eruptions are uncommon in Hawaii, such activity does occur and may trigger local tsunamis.

In California south of the Cascadia Subduction Zone, local tsunamis may be generated by large offshore or coastal fault movements. Some parts of the coast are cut by active reverse and thrust faults, which push up the coast or offshore ridges during large earthquakes. Other parts are dominated by strike-slip faulting, where large areas of seafloor uplift or subsidence occurs due to local irregularity in the fault trends. In southern California, large submarine landslides along the steep and unstable slopes of the continental shelf edge and offshore borderland ridges can generate locally-destructive tsunamis for the adjacent coastal areas.

The travel time for a locally-generated tsunami, from initiation at the source to arrival at coastal communities may be within five to 30 minutes. For example, a series of destructive tsunamis began striking coastal communities on Okushiri Island, Japan, about eight minutes after the July 12, 1993, Hokkaido-Nansei-Oki earthquake main shock. At least one village was hit by tsunami waves estimated to be 12 meters high (39.5 feet) while waves at other locations were between five and ten meters high (about 16.5 to 33 feet). Located almost directly above the epicentral area, the island received tsunami warnings about five minutes after the earthquake, about the best warning time possible with present technology. Fortunately, casualties were limited because people fled to evacuation sites on higher ground immediately after feeling the earthquake without waiting for an official warning. Public information and training programs were effective in reducing losses from this event.

Tsunamis from Distant Sources

Tsunamis from distant sources are the most common type observed along the Pacific Coast of the United States. Large tsunamis generated anywhere around the Pacific "Ring of Fire" propagate across the ocean with little energy loss before striking populated U.S. coastlines. The Pacific states may suffer both regional and Pacific-wide tsunamis. By definition, regional tsunamis affect smaller areas than Pacific-wide tsunamis, either because the energy released is of insufficient magnitude for Pacific-wide propagation or because the geographical configuration of the source area restricts the tsunami's spread. The combined impacts of the earthquake and regional tsunami that originated off the Philippine Islands on August 16, 1976, killed approximately 8,000 people in the affected area. Regional destructive tsunamis within the Sea of Japan in 1983 and 1993 were unable to propagate out into the larger Pacific Ocean basin.

Pacific-wide tsunamis, although less frequent than regional tsunamis, have greater destructive potential because the waves are larger, travel farther, and affect broader coastal areas. The time required for a distant tsunami to reach the Hawaiian and mainland coasts will vary between approximately 5½ to 18 hours, depending upon the tsunami's place of origin. The effects of a distant tsunami on a coastal area may be negligible or severe depending upon the magnitude of the tsunami, its source distance, and its direction of approach. For example, the tsunami generated by the May 22, 1960, Chile earthquake spread death and destruction across the Pacific Ocean from Chile to Hawaii, Japan, and the Philippines.

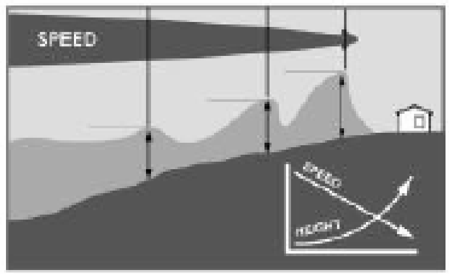
The coastal and offshore source zone measured about 135,000 square miles (approximately 218 miles by 622 miles), nearly the same area as the state of California. The length of the fault rupture may have reached 750 miles. As a result, over 2,000 fatalities occurred in Chile, due mostly to the tsunami. Losses also were severe in Hilo, Hawaii (61 fatalities and 282 serious injuries), and in Japan (122 fatalities). In contrast, Kodiak Island, Alaska, noted less than one meter rise in the water level, and losses in California were mainly in harbors where strong currents smashed, sank, or grounded small craft, and damaged dock facilities.

Tsunamis generated by the March 28, 1964, Alaskan earthquake caused both distant and local impacts, including losses in all five Pacific states, as well as other Pacific Rim countries. Alaska suffered 106 fatalities and over $84 million in damage, but in Hawaii, compared to the 1960 Chilean event, damage was minimal. In contrast, Crescent City, California, suffered ten fatalities and over $7 million in damage, and Kodiak Island, Alaska—one of several Alaskan cities and communities to suffer losses—experienced land subsidence of about 6.5 feet followed by ten waves that contributed to the destruction of about 80 percent of the industrial and commercial areas and killed 15 people. Kodiak's bedrock location limited earthquake shaking damage to only minor losses. Valdez, Alaska, experienced submarine landslides and local tsunamis where the highest wave reached 23 feet, destroying much of the town. Consequently, Valdez was rebuilt at a higher elevation to minimize future tsunami damage. Seward, Alaska, experienced tsunamis 30 to 40 feet high due to both fault rupture and local submarine landslides, causing extensive damage to the docking areas and fires in petroleum storage facilities.

Tsunami Characteristics

Tsunamis travel outward from the source area and may be highly directional. For example, for an earthquake-generated tsunami, most of the energy propagates at right angles away from the long axis of the source fault rupture. The wave speed depends on the water depth, undergoing accelerations and decelerations as the ocean bottom depth varies. Such wave speed changes cause the wave fronts to bend (refract), creating area where the energy is focused (wave height increases) and defocused (wave height decreases). In the open ocean, wave speeds may reach 500 miles per hour (800 kilometers per hour)—as fast as a jet airplane—with the distance between successive crests (wavelength) often exceeding 100 miles. Wave heights in deep water may be only a few feet high, and due to their long wavelength, produce only a gentle rise and fall of the sea surface that is usually unnoticed.

As a tsunami enters the shoaling waters near the coast, its wave speed diminishes, its wavelength decreases, and its height increases, often greatly. The first wave may not be the largest, with the initial wave typically being followed by several larger and more destructive waves. Even though the waves slow upon reaching the coastline, they still travel faster than Olympic long-distance runners—faster than 15 miles per hour.



As a tsunami approaches shore, it slows down and dramatically increases in height.

The configuration of the coastline, the shape of the ocean floor, and the characteristics of the advancing waves play important roles in the potential for destruction. For islands, no matter from which direction the tsunami arrives, all sides usually will be affected. As the wave wraps around the island, the height or run-up may be small at many points along the coast, but increases greatly where the two opposing wave fronts meet on the backside of the island. Focusing effects due to the wave front bending on irregular coasts may also result in locally high wave amplification. Bays, sounds, inlets, rivers, streams, offshore canyons, islands, and flood control channels may cause various effects and result in greater damage than many people would expect.

It has been estimated, for example, that a tsunami wave entering a Southern California flood control channel could reach a mile or more inland, especially if it enters at high tide. Offshore canyons can focus tsunami wave energy and islands can filter the energy. The orientation of the coastline determines if the waves strike head-on or are refracted from other parts of the coastline.

Unlike earthquake shaking where damage may occur over large areas in the source region— hundreds of square miles in many cases—tsunamis impact long, low-lying stretches of linear coastline, extending inland for relatively short distances. After striking a coast, the wave reflects back to sea, but may also be reflected back to the coast again and again from offshore islands or submerged ridges, banks, and shelves, as a series of waves.

Rather than rising water, the first visible indication of an approaching tsunami could be receding water (drawdown) caused by the wave trough preceding a large inbound wave crest. Rapid drawdown creates strong currents in harbor inlets and channels that can damage coastal structures due to erosive scour, such as around piers and pilings. As the water's surface drops, piers can be damaged by boats or ships straining at or breaking their mooring lines. The vessels can overturn or sink due to strong currents, collision with other objects, or impact with the harbor bottom.

Conversely, a rise in water level may be the first indication of a tsunami. The advancing tsunami may initially resemble a strong surge increasing the sea level like the rising tide, but the tsunami surge rises faster and does not stop at the shoreline. Even if the wave height appears to be small, for example, three to six feet, the strength of the accompanying surge can be deadly. Waist-high surges can cause strong currents that float cars, small structures, and other debris. Boats and debris are often carried inland by the surge and left stranded when the water recedes. Outflow following inundation also creates strong currents, which rip at structures and pound them with debris, and erode beaches and coastal structures.

Moreover, under certain conditions the crest of an advancing wave may overtake the preceding trough while some distance offshore, causing the wave to proceed shoreward as a "bore" with a churning front. The bore phenomenon resembles a step-like rise in the sea level that advances rapidly (from 10 to 60 miles per hour). Normal tidal bores at the Bay of Fundy, Canada, or the Yellow River, China, provide examples of this phenomenon.

The force and destructive effects of tsunamis should not be underestimated. At some locations the advancing turbulent wave front will be the most destructive part of the wave. In other situations, the greatest damage may be caused by the outflow of water back to the sea between crests, sweeping all before it and undermining roads, buildings, bulkheads, and other structures.

This outflow action can carry enormous amounts of highly damaging debris with it, resulting in further destruction. Ships and boats, unless moved away from shore, may be dashed against breakwaters, wharves, and other craft, or be washed ashore and left grounded after the seawater recedes.

Factors Unique to Tsunami Risk Management

Coastlines have always been a favored location for human settlements. Attractive coastal locations and a growing affluent population have combined to increase development of housing, maritime facilities, and resorts in coastal communities in recent times. Long gaps between devastating tsunami events (and apparent disregard of more frequent hazards such as strong storms, sea level changes, and coastal erosion) have produced a coastal population that seems to ignore the destructive tsunami threat. According to one recent estimate, 489 cities in Alaska, California, Hawaii, Oregon, and Washington are susceptible to tsunami inundation, with an estimated 900,000 people living or working within areas that could be inundated by a 50-foot tsunami.

The State of California has 152 cities in locations susceptible to damage from a tsunami affecting a population of 589.500 (2001 figures).[2]

Mainland coastal states and Hawaii have several unique factors that affect the siting of development and design of buildings. Recently prepared maps for several locations show potential tsunami inundation areas along different types of coastlines. Important factors affecting tsunami exposure include:

- All or parts of the mainland states are located near active subduction zones (Cascadia and Alaska-Aleutian) or other well-defined tsunami-producing zones. Local tsunamis generated by these zones will reach the coasts extremely quickly (within 5-30 minutes, depending on the distance to the zones).
- Strong earthquakes, whether accompanied by tsunamis or not, are rare events in most low lying coastal communities. With little strong ground shaking experience, these communities have little awareness of earthquake hazards. Yet even with minimal earthquake activity, the risk of damage from a major tsunami is considered high for these communities.
- Except in Hawaii and a few mainland coastal communities, tsunami awareness is not currently embedded in coastal community "culture".

[2] Source: TsuInfo Alert, v.2, no. 2, March-April 2000. Terry Wallace, University of Arizona, Department of Geosciences.

- Coastal communities vary in size, but with some notable exceptions, such as Los Angeles, Honolulu, Santa Barbara, San Francisco, and San Diego, most communities are relatively small.

- Many coastal communities are largely recreational, having many short-term and seasonal visitors. This presents a special problem as losses could be very high if a destructive tsunami occurred at a seasonal peak population time.

While the concept of mitigation is simple, there are many complex issues involved in achieving effective mitigation. Mitigation actions involve public policy, intergovernmental relations, public-private partnerships, economics, acceptable risk, and a wide range of specialized activities and programs. In all cases, mitigation programs and procedures are based on understanding the nature and probable severity of the hazard and the vulnerability of the area. Vulnerability assessments describe the weaknesses of buildings, systems and communities that make them susceptible to damage from the hazards.

Not all areas share the same hazard, vulnerability, and exposure. In general, a greater hazard justifies more rigorous mitigation measures. The key question becomes “How severe a problem are we dealing with in each community?” The answers to this question provide the basis for making public safety policy choices.

As with many natural hazards, exact probabilities or return intervals are extremely difficult to define, but two comparisons are instructive. First, California’s building designs have been based on earthquakes expected to occur once every 475 years with the intent that collapse will not occur. In the Midwest, designs are based on avoiding collapse in earthquakes occurring once in 2,500 years. Second, flood loss prevention policies deal with events expected to occur every 100 to 500 years. While Hilo, Hawaii, has experienced numerous tsunamis, and Crescent City,

California, experienced two damaging tsunamis in four years (1960 and 1964), many communities at risk have little or no recent history with tsunami damage. Where development has not yet occurred, one mitigation action is to avoid the hazard. This takes a combination of knowledge and willingness by decision makers to set aside such areas and define them as unacceptable risks. Where development already exists or is virtually certain to occur, two fundamental strategies are available to help ensure that the potential effects of natural hazards are considered during the planning process. Although oversimplified, these two approaches are: 1) managing the hazard; and 2) managing the development. For example, managing the hazard by improving drainage can help control small-scale flooding and keep developed areas dry. Managing the development, for example, by avoiding constructing improvements in high-velocity floodplains and landslide-prone hillsides may be more effective and less environmentally disruptive than building expensive structures to control flooding or landslides.

Although probabilities of occurrence may be extremely difficult to establish for tsunamis, using an approach similar to the application of probabilities to other hazards may be helpful. For example, a possible approach for tsunami mitigation is to prevent development or limit it to coastal-dependent facilities designed to the expected tsunami forces where tsunamis are expected once in every 100 years. Near-shore rapid-onset events (locally-generated tsunamis) could be subject to similar controls where tsunamis are expected once in every 500 years. In areas likely to experience tsunamis once in every 2,500 years, at least adequate evacuation precautions should exist, such as designing for vertical evacuation, designating “safe buildings”, and maintaining effective plans for horizontal evacuation from low-lying to higher ground areas.

This is especially true for areas with large resident or visitor coastal populations “at risk”, such as beach communities. Land use and mitigation actions taken for other reasons may also help limit tsunami damage. For example, preventing construction in floodplains, because of their highly saturated soils and low elevations, could reduce losses from tsunami inundation and earthquake ground shaking. Low density uses, such as parkways or protected habitat areas, could also help mitigate tsunami losses.

California Local Development Regulations/Programs

State law authorizes implementation of the local general plans through zoning, subdivision procedures, preparation of specific plans, capital facility programming, redevelopment, and development agreements. Based on statutory and case law, the use of all these implementation tools must be consistent with the local general plan.

State law requires that all cities and counties adopt building codes that are consistent with state adopted model codes (as of July 1, 1999, based on the 1997 Uniform Building Code (UBC)).

State law provides for State modification of the model codes and allows for some variations at the city/county level based on unique local conditions.

State Coastal Policies

The California Coastal Management Program (CCMP) was designed to respond to the federal Coastal Zone Management Act (CZMA) and was certified by the federal government in 1978. The enforceable policies of that document are contained in Chapter 3 of the California Coastal Act of 1976 (Public Resources Code Section 30000 et seq.). The California Coastal Commission is the lead agency responsible for the overall administration and operation of the CCMP.

Coastal cities and counties are subject to both the Planning and Zoning Law (as described above) and the California Coastal Act. The California Coastal Act applies to the coastal zone, a strip along the California coast generally “extending seaward to the state’s outer limit of jurisdiction, including all offshore islands, and extending inland generally 1,000 yards from the mean high tide line of the sea”. (Public Resources Code Section 30103) Each city or county lying wholly or partly within the coastal zone must prepare a Local Coastal Plan (LCP) for that part of its jurisdiction within the zone or request that the Coastal Commission prepare an LCP for them. An LCP consists of a coastal land use plan (i.e., portions of a city or county’s general plan), zoning ordinance, zoning district maps, and where required, other programs necessary to implement the Coastal Act. In addition, it must contain a specific public access component to assure that maximum public access to the coast and to public recreation areas is provided.

While the Coastal Act provides that the content of each LCP is to be determined by the local government in full consultation with the Commission and with full public participation, the LCP must address a list of policies that can be grouped under the following seven headings: access, recreational and visitor-serving uses, marine resources, agriculture, new development, public works, and coastal-dependent industrial development. The contents of coastal land use plans overlap most of the required content of general plans, and, for this reason, many local governments have integrated their coastal land use plans in their general plans. The specific contents of local coastal plans (LCPs) are not specified by state law. However, LCPs must be certified by the Coastal Commission as consistent with policies of the Coastal Act. It should be noted that since tsunami hazard areas can and do exceed the boundaries of the Coastal Zone, LCP policies cannot be relied upon exclusively to mitigate the tsunami risk.

The Coastal Act (Public Resources Code, Division 20) has provisions relating to geologic hazards, but does not mention tsunamis specifically. Section 30253(1) states that “…new development shall minimize risks to life and property in areas of high geologic, flood, and fire hazard.” Section 30610.1(c)(3) states that coastal development permits shall be required for the construction of single-family residences on vacant lots that are “located within an area known to the affected local government, or designated by any other public agency, as a geologic hazard area or as a flood hazard area...", unless it has been "determined by the affected local government to be a safe site for the construction of a single-family residence."

The 1965 McAteer-Petris Act established the San Francisco Bay Conservation and Development Commission (BCDC) as a state agency. The San Francisco Bay Plan, completed in 1969 and subsequently incorporated into state law, includes policies on 18 issues critical to the use of the Bay ranging from ports and public access to design considerations and weather. The 1969 revisions to the Act further specified that the San Francisco Bay Conservation and Development Commission is the permanent agency responsible for maintaining the Bay Plan and carrying out the provisions of the law. Over the years, the Commission has adopted a number of amendments to the Bay Plan, and the Legislature has amended the McAteer-Petris Act several times.

State Role

While State law requires the preparation of general plans and specifies the basic content of the general plan (including the required elements), there is no state land use plan or set of statewide goals or policies that general plans are required to meet. The Governor's Office of Planning and Research publishes the *General Plan Guidelines*, but these are advisory only.

The specific contents of Local Coastal Plans (LCPs) are not specified by state law either. However, LCPs must be certified by the Coastal Commission as consistent policies of the Coastal Act. In practice, the Coastal Commission has been very aggressive in ensuring conformance with Coastal Act policies.

The Seismic Hazards Mapping Act directs the State Geologist to compile maps identifying seismic hazards for use by local governments. The Act does not require the State Geologist to prepare maps for tsunamis or seiche hazards unless there is supplemental funding. The State Geologist, however, can adopt tsunami and seiche hazard maps prepared by other agencies. The State hazards maps are to be used in preparing local general plans and trigger requirements for geotechnical reports in connection with local government review and approval of individual project proposals.[3]

[3] This entire section was taken from "Background Paper 1: Understanding the Tsunami Risk", A multi-state mitigation project of the National Tsunami Hazard Mitigation Program (NTHMP).
Mitigation Program (NTHMP)

Sinkhole & Subsidence

Sinkholes and Subsidence were rated LOW PRIORITY HAZARDS in SMMUSD & SMC

Impact

SMMUSD and SMC

The school districts rated Sinkholes and Subsidence low due to the locations of their facilities. The facilities are not at risk at this time. The risk rating will be elevate if they become aware of potential exposure to danger or vulnerability.

Land subsidence (the vertical downward movement of the land surface) has a variety of causes, including some that are related exclusively to human activities (e.g. mining and drainage of organic soils). We have already seen that subsidence can result from isostatic adjustments and natural compaction. Now we shall examine subsidence caused by fluid withdrawal, sinkhole development, and hydro-compaction.

Deep Subsidence

Deep subsidence is the slow downward movement of land caused by the compaction of sediments that occur below the earth's surface.

Deep subsidence occurs in locations where fluids under pressure are withdrawn from the subsurface. This includes groundwater taken from confined aquifers and fluids pumped from oil and gas reservoirs.

Central Valley, California: world's largest area of subsidence (geology)Long Beach, CA: up to 30 feet of subsidence occurred over an oil field

When fluids held under pressure within the subsurface are withdrawn, the fluid pressure drops. If the formation from which fluids were taken is composed of compressible sediments, a reduction in fluid pressure can cause the overlying formations to slowly subside.

Santa Clara Valley, CA: groundwater levels correlate with subsidence. Long Beach, CA: subsidence has been halted by using injection wells

Sinkholes

There are three types of sinkholes, each of which forms in a different way. Collapse sinkholes are by far the most hazardous because of how suddenly they can form.

1. SOLUTION SINKHOLES

Solution sinkholes form where soluble bedrock (i.e., limestone, dolomite, marble, or rock salt) is exposed at the land surface and therefore subject to dissolution by surface water. Runoff collects in natural depressions (often where bedrock fractures intersect) and slowly dissolves a sinkhole.

2. SUBSIDENCE SINKHOLES

Subsidence sinkholes are similar to solution sinkholes, except the soluble bedrock is covered by a thin layer of unconsolidated material (e.g., soil and/or sediment). Surface water infiltration dissolves cavities where the bedrock is most intensely fractured, and the overlying sediments gradually move downward into the expanding cavity.

3. COLLAPSE SINKHOLES

Collapse sinkholes form when surface materials suddenly sink into a subsurface cavity or cave. Cavities form slowly over time as groundwater moves along fractures in soluble bedrock and enlarge them through dissolution. Collapse can occur in two different ways: (where caves are found)

When a cavity gets sufficiently large, the "roof" becomes too thin to support its own weight and the weight of any overlying rock or sediment, so it collapses into the cavity.

Sometimes cavities are able to support the weight of overlying materials (usually sediments) by virtue of being completely filled with groundwater. If the groundwater level is lowered, then the overburden will first erode and then collapse into the dewatered cavity.

Hydro-compaction

Hydro-compaction is the subsidence of shallow soils and sediments as a result of adding water to the land surface. Typically this occurs in dry regions where agriculture relies on extensive irrigation) is notable not for the magnitude of the subsidence that occurs but for the fact that much of the western United States has the type of geologic conditions which are susceptible to this phenomenon.

The sediments that are susceptible to hydro-compaction were loosely deposited in an arid or semi-arid environment by processes that left them with a very high porosity (> 45%). As these sediments dry out, their high-porosity structure is preserved by clay particles that act as "bridges" to cement the larger particles together. If water is added, the clay "cement" loses its strength, and the sediment subsides under its own weight.

Volcano

Volcano was rated a LOW PRIORITY HAZARD in SMMUSD & SMC.

A volcano is a mountain that is built up by an accumulation of lava, ash flows, and airborne ash and dust. When pressure from gases and the molten rock within the volcano becomes strong enough to cause an explosion, volcanic eruptions occur.

No active volcanoes are in Los Angeles County. No historical record of this hazard is available for the region.

Potential Losses for Natural Hazards

Estimated Potential Losses for High & Moderate Natural Hazards

(Santa Monica-Malibu Unified School District & Santa Monica College)

(In K for thousands, M for millions.)

Hazard	Estimated Daily Population at risk	Potential $ losses to Critical Facilities or Infrastructure	Potential $ losses to Other Owned Buildings	Potential Other $ losses (Environmental, Historical, Economic, Human)	Total Potential $ losses for this hazard
Totals	12,545 Enrollment 1200 Employees	$41.4M	$0	$1.2M	$42.6M
Earthquake*	2.4K 228	$7.9M	$0	$228K	$8.3M
Wild Fire**	251 >10	$828K	$0	$24K	$852K
Destructive Winds***	>40 >10	$50K	$0	>$10K	$60K
Severe Weather****	>30 >10	$46K	$0	>$10K	$56K
Floods*****	>30 >10	$42K	$0	>$10K	$52K
Drought******	>10 >5	$13K	$0	>$5K	$18K
Low Risk Natural Hazards	Tsunami, Sinkholes/Subsidence, Volcano				

* 19% estimate based on LA County HAZUS Studies
** 2% estimate based on past losses within LA County
*** .12% estimated based on past losses within LA County
**** .11% estimated on past losses
***** .1% estimated on past losses
****** .03% estimated

Estimated Potential Losses for High & Moderate Natural Hazards

(Santa Monica-College)

(In K for thousands, M for millions.)

Hazard	Estimated Daily Population at risk	Potential $ losses to Critical Facilities or Infrastructure	Potential $ losses to Other Owned Buildings	Potential Other $ losses (Environmental, Historical, Economic, Human)	Total Potential $ losses for this hazard
Totals	25,000 Enrollment 2635 Employees	$56.6M	$0	$3.4M	$60M
Earthquake*	4.8K 501	$10.8M	$0	$646K	$11.5M
Wild Fire**	500 >60	$1.2M	$0	$68K	$1.3M
Destructive Winds***	>40 >10	$68K	$0	>$10K	$78K
Severe Weather****	>30 >10	$63K	$0	>$10K	$73K
Floods*****	>30 >10	$57K	$0	>$10K	$67K
Drought******	>10 >5	$17K	$0	>$5K	$22K
Low Risk Natural Hazards	Tsunami, Sinkholes/Subsidence, Volcano				

* 19% estimate based on LA County HAZUS Studies
** 2% estimate based on past losses within LA County
*** .12% estimated based on past losses within LA County
**** .11% estimated on past losses
***** .1% estimated on past losses
****** .03% estimated

High Risk Human-caused Hazards

Terrorism & Weapons of Mass Destruction (WMD)

Terrorism & WMD were rated as HIGH PRIORITY HAZARDS in SMMUSD & SMC

The complexity, scope, and potential consequences of a terrorist threat or incident require that there be a rapid and decisive capability to resolve the situation. The resolution to an act of terrorism demands an extraordinary level of coordination of crisis and consequence management functions and technical expertise across all levels of government. No single Federal, State, or local governmental agency has the capability or requisite authority to respond independently and mitigate the consequences of such a threat to national security. The incident may affect a single location or multiple locations, each of which maybe a disaster scene, a hazardous scene and/or a crime scene simultaneously.

Differences Between WMD Incidents and Other Incidents

As in all incidents, WMD incidents may involve mass casualties and damage to buildings or other types of property. However, there are several factors surrounding WMD incidents that are unlike any other type of incidents that must be taken into consideration when planning a response. First responders' ability to identify aspects of the incident (e.g., signs and symptoms exhibited by victims) and report them accurately will be essential to maximizing the use of critical local resources and for triggering a Federal response.

1. The situation may not be recognizable until there are multiple casualties. Most chemical and biological agents are not detectable by methods used for explosives and firearms. Most agents can be carried in containers that look like ordinary items.

2. There may be multiple events (e.g., one event in an attempt to influence another event's outcome).

3. Responders are placed at a higher risk of becoming casualties. Because agents are not readily identifiable, responders may become contaminated before recognizing the agent involved. Additionally, first responders may be targets for secondary releases or explosions.

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

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

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

7. There will be a stronger reaction from the public than with other types of incidents. The thought of exposure to a chemical or biological agent or radiation evokes terror in most people. The fear of the unknown also makes the public's response more severe.

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

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

10. Specialized State and local response capabilities may be overwhelmed.

State of California Terrorism Guidance

The catastrophic attacks on the World Trade Center Building in New York City and the Alfred P. Murrah Federal Building in Oklahoma City shocked the nation into the reality that there are no domestic safe havens from acts of terrorism. These two apparently unrelated events punctuate our nation's vulnerability, and highlight California's risk of similar attack against its public officials, private and multi-national corporations, public infrastructure, and government facilities.

Historically, California has had a long experience combating terrorist groups, both domestic and international. Domestic terrorist groups in the state have been largely issue-oriented, while the few known internationally based incidents have mostly targeted the state's émigré communities and been related to foreign disputes. Today, however, both groups are more likely to be aligned nationally and/or internationally through electronic networking. The issues and politics of these groups remain essentially unchanged but now include increasing expressions of hatred for existing forms of government. The World Trade Center Incident demonstrates that international terrorist groups have the potential to operate with deadly effectiveness in this country. Such groups may offer no allegiance to any particular country but seek political or personal objectives that transcend national/state boundaries.

There is appropriate concern that such attacks as witnessed in Tokyo, New York City, and Oklahoma City could occur in California. A terrorist acting alone or in concert with any of the known national or international groups could readily commit acts of terrorism in California. The open availability of basic shelf-type chemicals and mail order biological research materials, coupled with an access to even the crudest laboratory facilities, could enable the individual extremist or an organized terrorist faction to manufacture proven highly lethal substances or to fashion less sophisticated weapons of mass destruction. The use of such weapons could result in mass casualties, long term contamination, and wreak havoc to both the state and national economies.

The freedom of movement and virtually unrestricted access to government officials, buildings, and critical infrastructure afforded to California's citizens and foreign visitors, presents the terrorist with the opportunity and conditions of anonymity to deliver such devastation and its tragic consequences with only the crudest devices of nuclear, chemical, or biological content.

Terrorist incidents create a unique environment in which to manage emergency response. Local responders are typically the first on scene during an actual incident and local government has primary responsibility for protecting public health and safety. Ordinarily, the local first response will be conducted under California's Standardized Emergency Management System (SEMS), which forms the basis of California's concept of operations for managing any kind of emergency or disaster, including terrorist incidents. The local responders will manage all aspects of the incident until the FBI assumes command, by virtue of its legal authority, of the law enforcement aspects relating to identifying, apprehending, and neutralizing the terrorists and their weapons. Local and state authorities always maintain control of their response resources and continue to operate utilizing SEMS.

Governor's Office of Emergency Services Terrorism Response Plan

Los Angeles County Terrorism Early Warning (TEW) Group

Effective and rapid dissemination of indications and warnings to local emergency response agencies is an essential yet problematic element of terrorism management efforts. For bio-terrorist threats, such efforts must integrate ongoing real-time surveillance efforts. Terrorism Early Warning Groups are a multilateral, multidisciplinary effort to monitor open source data to identify trends and potential threats, monitor potential threat information during periods of heightened concern, assess potential targets and perform net assessments to guide decision making during actual events. TEW provides integrated threat and net assessment from a multi-jurisdictional perspective. City and county fire departments work together with emergency management, FBI, local law enforcement agencies, Department of Health Services, as well as other state and federal offices. The formation of TEW groups supports field response in the preparation for and response to acts of terrorism.

IAFC, October 2001 (et sec)

The Los Angeles Operational Area TEW Group provides Unified Command Structure with the impact of an attack on the operational area, gauges resource needs and shortfalls, continuously monitors and assesses situational awareness and status, and acts as the point of contact for inter-agency liaison in order to develop options for courses of action for incident resolution. TEW is an Emerging Threat Workspace (Civil Battle Lab) for stimulating National Strategy for emerging threat issues:

- Terrorism and Infrastructure Protection
- Public Order (Riots/Disturbances)
- Civil-Military Interoperability for Urban Operations
- Civilian Police (CIVPOL) for Peace Officers
- Networked Threats and Emerging Threats
- Counterterrorism Technology Test Bed

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 state=s 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 Aone-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.

Targeting Information (CONFIDENTIAL INFORMATION)

The following are listed in the Los Angeles County All-Hazard Mitigation Plan as High Risk Terrorist Targets. Because of their proximity to Santa Monica-Malibu Unified School District facilities and Santa Monica College facilities, the committee elected to show them here.

Santa Monica Promenade

3RD. & Santa Monica Blvd	***Lat:***	34.01 North	***Long:***	-118.49 West

Santa Monica Pier

	Lat:	34.00 North	***Long:***	-118.49 West

In recent history, schools have become high profile targets to terrorists. Domestic terrorism activity on school grounds draws a great deal of public attention and is a source of major concern for all communities. The potential for disastrous consequences is high, however, terrorism on school grounds does not generally elevate into disaster proportions and is usually handled by the local jurisdictions affected.

For the school district and for the college, an act of terrorism involving one or more facilities is considered a high risk priority.

Terrorism Mitigation

Because the primary mechanism for past terrorist incidents has been bombings and because of the potential for mass casualties from a WMD terrorist event, the primary focus of the state's hazard mitigation strategy for terrorism is on mitigation measures that reduce risk from bomb blast and nuclear, biological, and chemical attacks to critical state facilities and population. Measures include:

Hardening (construction/retrofitting)

- Relocation/retrofitting of air intakes
- Ventilation system upgrade/retrofit
- Protect tower bases of bridges
- Seismic retrofitting
- Upgrade/retrofit water main system
- Blast guard window film/glazing, frames
- Egress improvements

Barriers and Fencing

- Fencing around air intakes
- Fencing around fuel supply
- Vehicle barriers, bollards, popup gates, hydraulic barriers
- Waterfront security system
- Perimeter fencing

Redundant systems

- Fire protection system
- Communications systems
- Information technology

- Utility (Gas/Heat/Water)
  Utility (Electric)

Security Measures

- Security systems/early warning systems
- Warning and alarms systems directly related to system protection/shut down
- Smart utility management systems on all critical services.

Planning/Studies

- Telecommunications plans
- IT disaster recovery plans
- Business continuity/resumption plans
- Intelligence gathering and sharing
- Threat, vulnerability, and risk assessments
- Evacuation plans
- Site security planning

Seismic Study

- Retrofitting
- Interior lighting
- Exterior lighting
- Staging areas

Secure Access & Entry Points

- Card swipe system
- Magnetometer
- Metal detectors
- Surveillance cameras & closed circuit TVs
- Personnel detection equipment
- Vehicle detection equipment
- Radar systems
- Building access system
- Motion detectors
- Replacing door locks and keys

IT systems

- Security management system
- Building access system
- Employee identification system
- Coding protocol for sensitive records.

These above-listed measures are already being used in many communities and situations and have proven effective in reducing or eliminating hazard risk. Each of these measures directly meets an objective stated in the state's Hazard Mitigation Strategy.

Utility Loss

Utility Loss was rated a HIGH PRIORITY HAZARD in SMMSUD & SMC.

The 2000-2001 California electricity crisis brought to light many critical issues surrounding the state's power generation and distribution system, including its dependency on out-of-state resources. Although California has implemented effective energy conservation programs, the state continues to experience both population growth and weather cycles that contribute to a heavy demand for power.

Hydro-generation provides approximately 25 percent of California's electric power, with the balance coming from fossil fuels, nuclear, and green sources. As experienced in 2000 and 2001, blackouts can occur due to losses in transmission or generation and/or extremely severe temperatures that lead to heavy electric power consumption.

The Impact of Any Loss of Power on Water & Sewer Systems

California is a populous state that receives minimal rainfall. Approximately 70% of the population obtains its drinking water from surface sources with the remainder relying on ground water supplies. The basic types of system used by the water companies are pressurized (pressure fed) and non-pressurized (gravity fed) systems. The basic types of system used by the sewer companies are collection and treatment systems that use force pumps to move sewerage.

Drinking water is supplied to California residents through a myriad of governmental agencies, cities, districts, private utilities, mutual water companies, private businesses, and individually owned wells. There are over 10,000 public water suppliers in the state serving water to approximately 29 million consumers. Less than 10% of the public water systems in the state serve collectively more than 95% of the state's population. The remaining 90% of the systems serves less than 5% of the population. D.01-05-089 added Category M (limited other customers as necessary to protect public health and safety, to the extent exempted by the Commission) to the list of essential customers normally exempt from rotating outages.

Due to the energy situation and rolling blackouts that occurred earlier in the year, the Water Division has conducted an informal inquiry into the impact of the rolling blackouts and has concluded that during the first four months of the year, California energy situation and rolling blackouts have had no significant impact upon the California Water and Sewer System Industries, in part due to the "Y2K" efforts in 1999. Water utilities and sewer system utilities appear to have the matter well under control with little to no impact on customer service at this time.

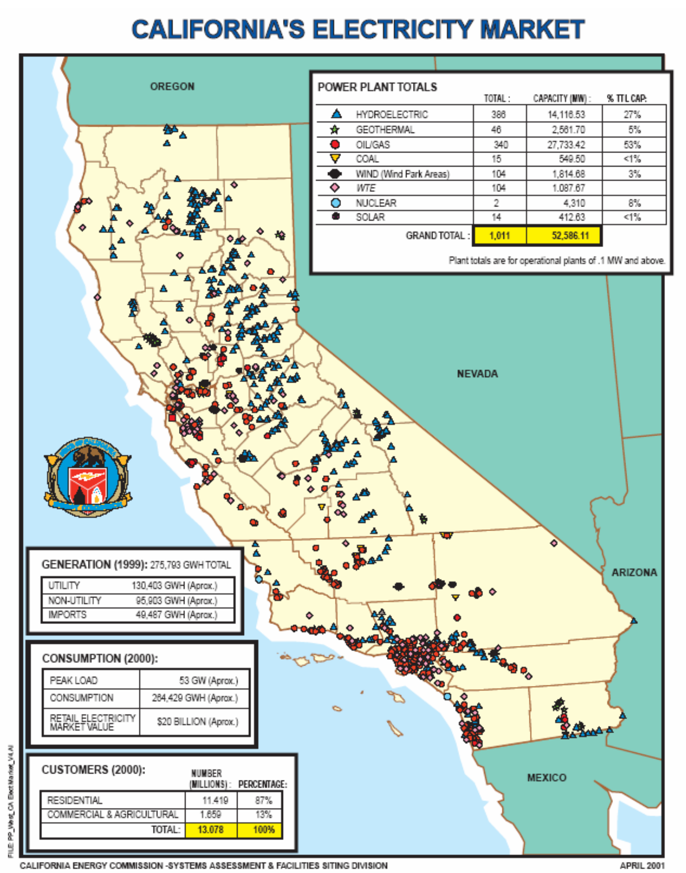
The Effects on Public Health and Safety

Public health and safety must be the primary factor used to evaluate a customer's eligibility for exemption from rotating outages. Exempting a fire department from rotating outages is of little value if the water resources needed to fight these fires are not available to it, particular during the high fire season. Fires that start during extreme fire weather conditions are a high risk to the safety of the residents and firefighters, and have a high probability of spreading rapidly and inflicting major property loss, if water pumping facilities are compromised.

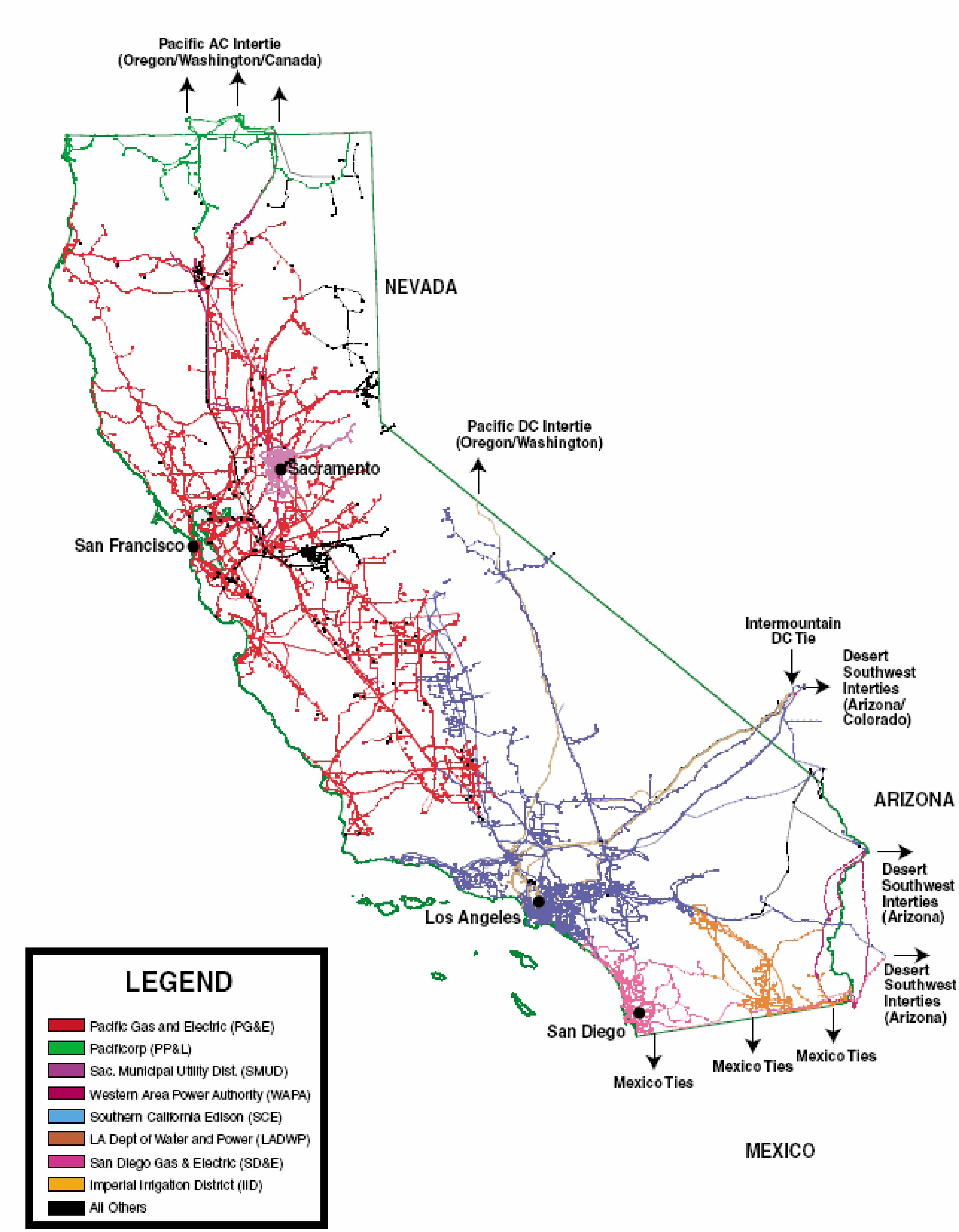
A review of the Chief of the Los Angeles County Fire Department's (LACFD) comments indicated that the emergency restoration procedures are likely inadequate and do not ensure that sufficient water supplies will be available in an emergency. LACFD also is concerned that the procedures have not been activated nor tested, the procedures may not have been communicated consistently between the electric utilities, water agencies and fire fighting forces, the procedures do not provide for the instantaneous supply of water required in a fire emergency, and the current procedures require the caller to identify the exact location of the power restoration.

California has experienced many power outages from natural disasters such as fires, floods, earthquakes, and rainstorms. This means that water and sewer systems must have adequate back up power for extended electric outages independent of rolling blackouts. Many large water systems have adequate storage facilities and have installed backup generators to maintain system pressures during power failure due to “Y2K” efforts. Rotating power outage duration is usually less than two hours or between two to four hours. Therefore, rolling blackouts have little impact on customer service.

In addition, water and sewer treatment utilities may request partial or complete rotating outage exemption from electric utilities in times of emergency identified as requiring their service, such as fire fighting. The Water Division believes that it is reasonable to order electric companies to notify all of their water and sewer customers and test the emergency restoration procedures to minimize the effects on public health and safety. The Water Division recommends that water and sewer companies be excluded from the Category M.



Power Transmission Lines in California



Data/Telecommunications Disruption

Data/Telecommunications Disruption was rated a HIGH PRIORITY HAZARD in SMMUSD & SMC

SMMUSD & SMC 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.

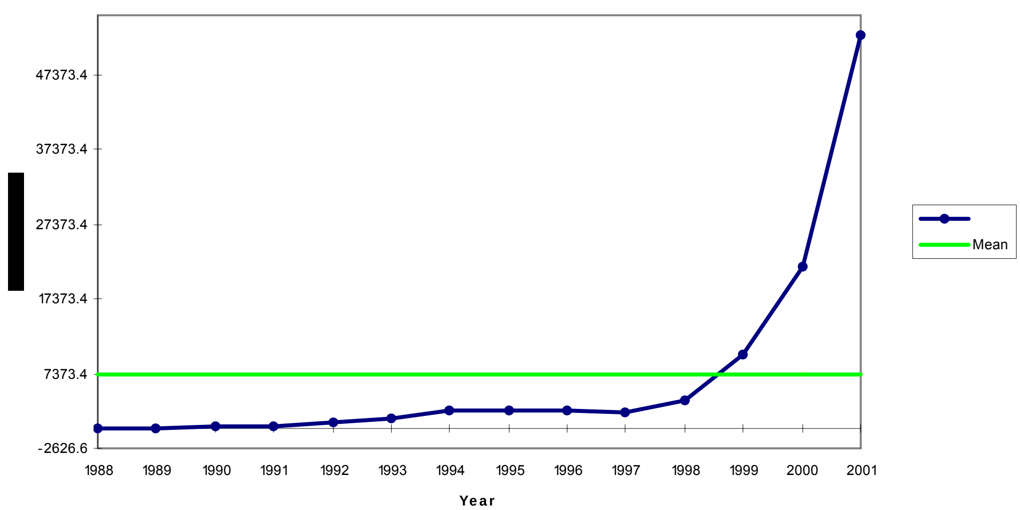
An effective risk management process is an important component of a successful IT security program. The principal goal of an organization's risk management process should be to protect the *organization and its ability to perform their mission*, not just its IT assets. Therefore, the risk management 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.

Reported Database Breaches/Incidents

Source of Data: CERT® Coordination



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

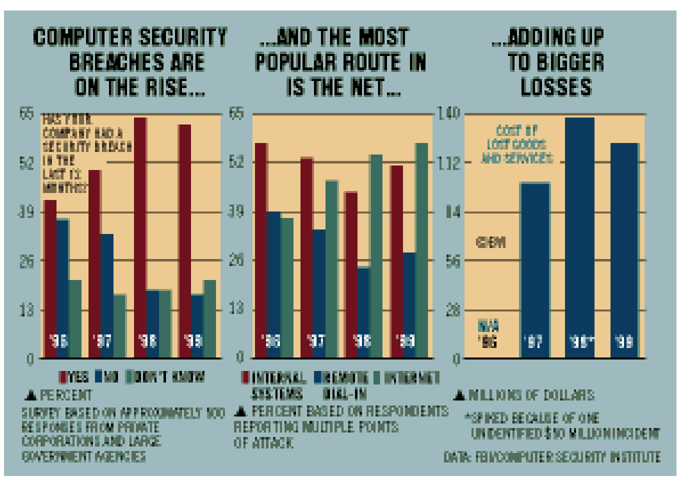
Cyber Crime

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

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

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

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



It's point and click, then stick 'em up. Interested in a little mayhem? Security experts estimate that there are 1,900 Web sites that offer the digital tools--for free--that will let people snoop, crash computers, hijack control of a machine, or retrieve a copy of every keystroke. Steve O'Brien, vice-president for information operation assessments at Info-Ops.com, an Annapolis (Md.)-based company that provides intrusion detection services and security solutions, says the number of ways to hack into computers is rising fast. He tracks potential threats both from hacker groups and from the proliferation of programs. Once a rare find, he now discovers at least three new nasty software programs or vulnerabilities every day. And those tools aren't just for the intellectually curious. "Anyone can get them off the Internet--just point and click away," says Robert N. Weaver, a Secret Service agent in charge of the New York Area Electronic Crimes Task Force.

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

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

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. The following six steps describe the basic functions an organization should employ when developing contingency plans.

Computer Security Incident Handling

A computer security incident can result from a computer virus, other malicious code, or a system intruder, either an insider or an outsider. The definition of a computer security incident is somewhat flexible and may vary by organization and computing environment. An incident handling capability may be viewed as a component of contingency planning, because it provides the ability to react quickly and efficiently to disruptions in normal processing. Incident handling can be considered that portion of contingency planning that responds to malicious technical threats.

Awareness and Training

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

Security Considerations in Computer Support and Operations

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

Physical and Environmental Security

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

Identification and Authentication

Identification and Authentication is a critical building block of computer security since it is the basis for most types of access control and for establishing user accountability. Identification [6] and Authentication is a technical measure that prevents unauthorized people (or unauthorized processes) from entering an IT system. Access control usually requires that the system be able to identify and differentiate among users. For example, access control is often based on *least privilege*, which refers to the granting to users of only those accesses minimally required to perform their duties. User accountability requires the linking of activities on an IT system to specific individuals and, therefore, requires the system to identify users.

Logical Access Control

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

Audit Trails

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

Cryptography

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

Aviation Disaster

Aviation Disaster is a HIGH PRIORITY RISK to SMMUSD & SMC.

SMMUSD and SMC are surrounded by airports and lay under their plan patterns. They recognize the risk, but are unable to have any direct control over mitigation strategy.

Airline Incidents

Because of the tremendous volume of transportation (commercial and private) into and out of LA County, the potential for a disastrous transportation-related event exists. Generally, transportation accidents are incidents that are handled by local jurisdictions or by jurisdictional mutual aid responses. A transportation accident, combined with a volatile hazardous substance or a large number of people, has the potential for becoming an event that requires a major mobilization of local, county, state and federal agencies.

According to the Department of Transportation, from 1994 to 2000 there were more than 1,800 fatal tractor-trailer accidents in the state, and from 1990 to 2001 more than 4,200 train accidents.

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, OES recognizes the severity of these incidents as they often lead to deaths and injuries.

Airline(s)/Flight	Location	Airline(s)/Flight	Location
South West 1455	Burbank	Swift Air Lines, Inc.	Marina Del Rey
Phoenix Air 35A	Fresno	Pacific Southwest Airlines	San Diego
USAIR 1493/Skywest 5569	Los Angeles	Continental Airlines	Los Angeles
Bell	Alamo	Jet Aviation, Ltd.	Palm Springs
North Star/Cessna	Oakland	Mercer Airlines	Van Nuys
Aero naves De Mexico/Piper	Cerritos	Golden West Airlines	Whittier
China Airlines	San Francisco	Sierra Pacific Airlines	Bishop
Western Helicopters	Valencia	Trans World Airlines	Los Angeles
McDonell Douglas Corp.	Edwards AFB	Spectrum Air, Inc.	Sacramento
Air California 336	Orange County	Trans World Airlines	San Francisco

Most Recent Accident

On March 5, 2000, 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.

Los Angeles County Airports & Airfields

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 (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 Municipal Airport (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

Transportation Incidents

Transportation Accidents, Incidents, Pipelines were rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC.

Train Incidents

Train derailments are so localized that the incidents themselves would not constitute a disaster. However, 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 forest fires could occur.

There have been 14 train accidents affecting 12 communities 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

Highway Incidents

On any given day, Los Angeles County highways have thousands of large trucks carrying all sorts of cargos (including hazardous materials). The potential for a highway accident involving one or more trucks carrying volatile cargo is great. Generally, these accidents are handled as incidents by the appropriate jurisdiction; however, because of the dense population and shear volume of vehicular traffic, the risk of a crash becoming a catastrophic event grows.

In 2001, 429,000 large trucks (gross vehicle weight rating greater than 10,000 lbs.) were involved in traffic crashes in the United States: 4,793 were involved in fatal crashes. A total of 5,082 people died (12 percent of all the traffic fatalities reported in 2001) and an additional 131,000 were injured in those crashes.

In 2000, large trucks accounted for 4 percent of all registered vehicles and 7 percent of total vehicle miles traveled (2001 registered vehicle and vehicle miles traveled data not available). In 2001, large trucks accounted for 8 percent of all vehicles involved in fatal crashes and 4 percent of all vehicles involved in injury and property-damage-only crashes.

According to a 1999 study performed by the FMCSA (*Cost of Large Truck- and Bus-Involved Crashes*), the average cost per crash involving a large truck is $75,637. With 429,000 large truck-related crashes in 2001, the total monetary expense for 2001 is minimally $32,448,273,000.00 using 1999 cost estimates.

Chain reaction accidents on crowded interstate highways that intertwine Los Angeles County are also another consideration. These events can quickly grow into localized disasters that overstrain local responders. Potentially, they could expand into catastrophic incidents involving hazardous materials, mass casualties, fire, and transportation disruption. Depending on the occurrence, the response could involve mass evacuation, mutual aid and other aspects of managing a disaster.

Maritime Incidents

There is ever-present danger of boat collisions and crashes in the crowded waters off Los Angeles County. There is also the constant potential for plane crashes in the ocean. A recent development was enforcement of FAA policy mandating disaster response plans for planes taking off over the ocean from L.A. International Airport. The U.S. Coast Guard, L.A. County Lifeguards, County Fire Department, L.A. City Fire Department, L.A. County Sheriffs, and other allied agencies have developed a response plan for airliner crashes in the Santa Monica Bay.

Part of the plan calls for personnel from L.A. County Fire Station 110, USAR1, and the Air Operations Section to fly rescue swimmers to the crash site, deploy them from helicopters with inflatable life boats, and to begin rescue operations while other agencies respond with boats and helicopters to remove people from the water. These "Blue Water Rescue" teams may also be dispatched to boating accidents in the open ocean.

U.S. ports are foreign flag vessels. Operators of shallow-draft vessels are more likely to be U.S. corporations. In many ports, there are more shallow-draft vessel movements than deep-draft arrivals. In 1993, nearly 5,200 towing vessels, 26,800 dry cargo barges, and 4,000 tank barges traveled through U.S. waterways (U.S. Army Corps of Engineers, 1993), most of them stopping at coastal ports while on canal or river voyages.

Many commercial vessels carry passengers, heightening the need for attention to safety. Ferries and specialty vessels, such as casino ships and sport fishing boats, number in the thousands and may carry several hundred passengers at once (National Research Council, 1995). The cruise industry is a growing maritime presence, with single ships carrying as many as 3,300 persons and many of the leading cruise markets in or adjacent to U.S. waters (National Research Council, 1995).

Public reaction to major ship accidents and resulting catastrophic oil spills have been the driving force behind major government initiatives to develop new or improved VTS systems in U.S. ports. In 1971, two tankers collided in the fog near the Golden Gate Bridge in San Francisco spilling about 3,000 tons of heavy oil and setting in motion legislation that led to the VTS systems now installed in San Francisco, Puget Sound, New York, and Houston. A subsequent report stated that the overriding cause of the accident was the lack of Coast Guard authority to control traffic, a situation that allowed vessels to forgo communications with traffic advisers (Office of Technology Assessment, 1975). Instead of counting on radar and radio technologies, the ships used only foghorns, which went unheard (Office of Technology Assessment, 1975).

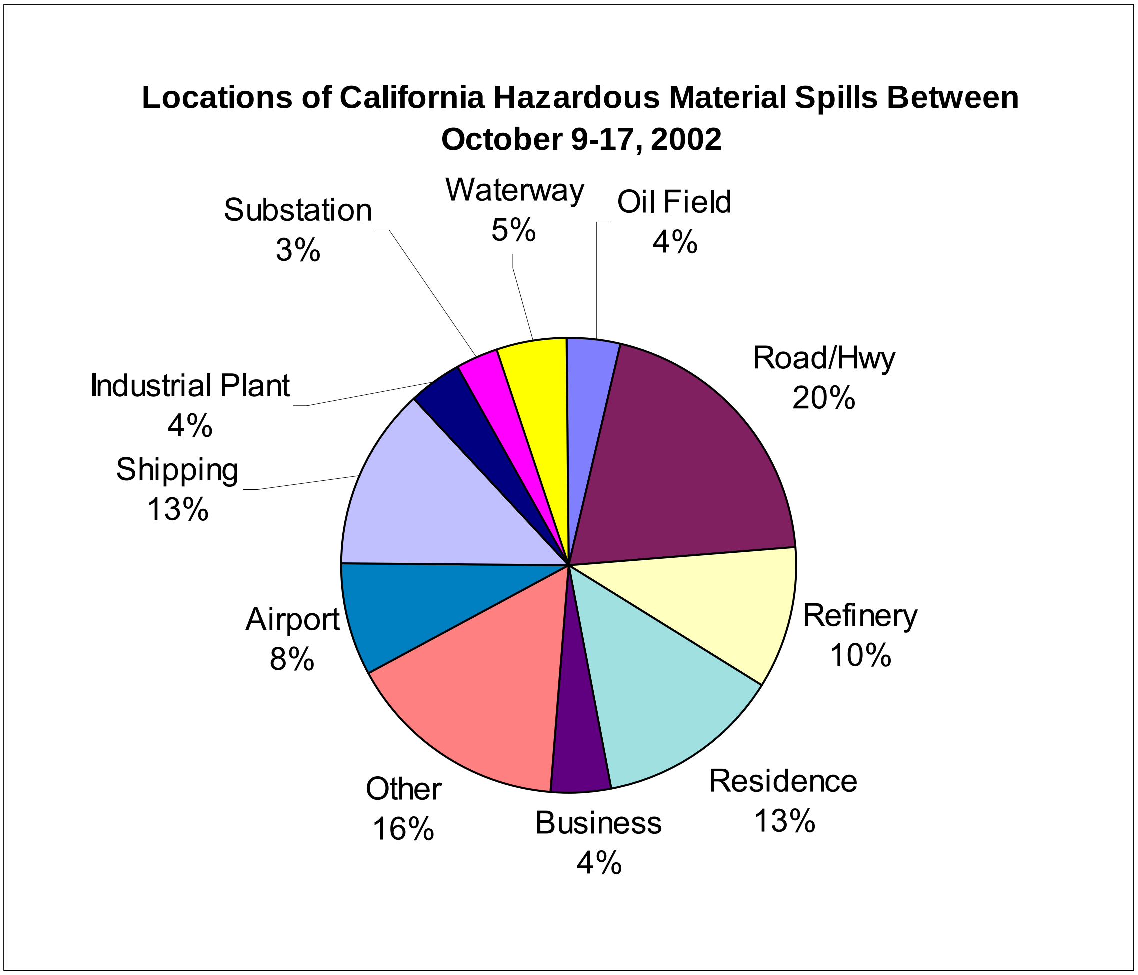
The years following that accident were marked by many maritime safety initiatives, including improvements in navigation information technologies and the deployment of VTS systems. But in 1989, when the *Exxon Valdez* ran aground outside the Prince William Sound VTS surveillance area and spilled 35,000 tons of Alaskan crude oil, the resulting damage and clean-up costs totaled several billion dollars (Office of Technology Assessment, 1990) and provoked enduring public distrust of assurances about tanker safety. This accident and its aftermath led to the congressional legislation that, in turn, resulted in the VTS-2000 program.

The public outcry over maritime safety tends to run in cycles, reaching a peak just after major accidents and then appearing to diminish with time. However, with major oil spills occurring around the world and spills reported regularly in the United States, the safety of U.S. ports and waterways is likely to remain a continuing concern.

Hazardous Materials

Hazardous Materials Incidents are part of Transportation Loss/Incidents and Pipelines

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.



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.

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. Next will follow a discussion of the effects of a hazardous materials incident occurring in a highway scenario.

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 incident 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 anyplace 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. Local agencies. 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 schools in one or more of the following ways:

- Shelter-in-place
- Evacuations
- Restriction or detour of local traffic
- Damage
- 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 Code2453 3. 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. The California Highway Patrol has designated Maps 12 through 13A (13 CCR Section 1152.2-3.1) as required hazardous materials inspection stop locations and areas for Safe Stopping Places.

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 1166 2. 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.

Economic Disruption

Economic Disruption was rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC

Los Angeles County is the most populous county in the nation. With approximately 10 million residents, it is home to about 30 percent of the state's population. The county has grown by nearly 2 million residents in the past 20 years, including more new immigrants than any other region of the country except the New York City area. Today, the county's population is 45 percent Latino, 31 percent non-Latino white, 12 percent Asian, and 10 percent black—similar to the racial/ethnic profile that state demographers predict for California by 2040. The county is also home to large numbers of low-income residents. Reflecting the size and diversity of the county, local government is large and complex, as are the problems of delivering local services to residents. In recent years, local governments in Los Angeles County have confronted difficult issues such as providing health care for the uninsured, reducing air pollution, improving low-performing schools, coping with racial/ethnic tensions involving police actions, and coming to terms with local efforts to secede from the city of Los Angeles. There are also housing, transportation, land use, and environmental issues relating to population growth and development. These factors tend to contribute negatively, on a large scale, to any economic downturn or disruption in the community.

"…Los Angeles County's suburban areas, like Orange County, are becoming so densely settled that they could be said to be urbanizing. Financial and social elites are withdrawing from civic leadership. "People think that most countries and cities and societies are moving away from industrialization," he says. "The notion of a postindustrial society is just wrong."

For example, the rise and decline of manufacturing jobs in American cities has taken a surprising twist in Los Angeles. The Chicago model of urban development assumed a growing industrial base. But in the 1960's and 70's, the traditional assembly-line factories that employed so many urban workers succumbed to cheaper labor overseas.

In the 1980's, the Pentagon's military buildup buoyed L.A.'s aerospace and defense companies and insulated the region from the industrial decline. After the cold war ended, however, cutbacks in defense spending hit Southern California particularly hard and deepened the recession of the early 1990's…."

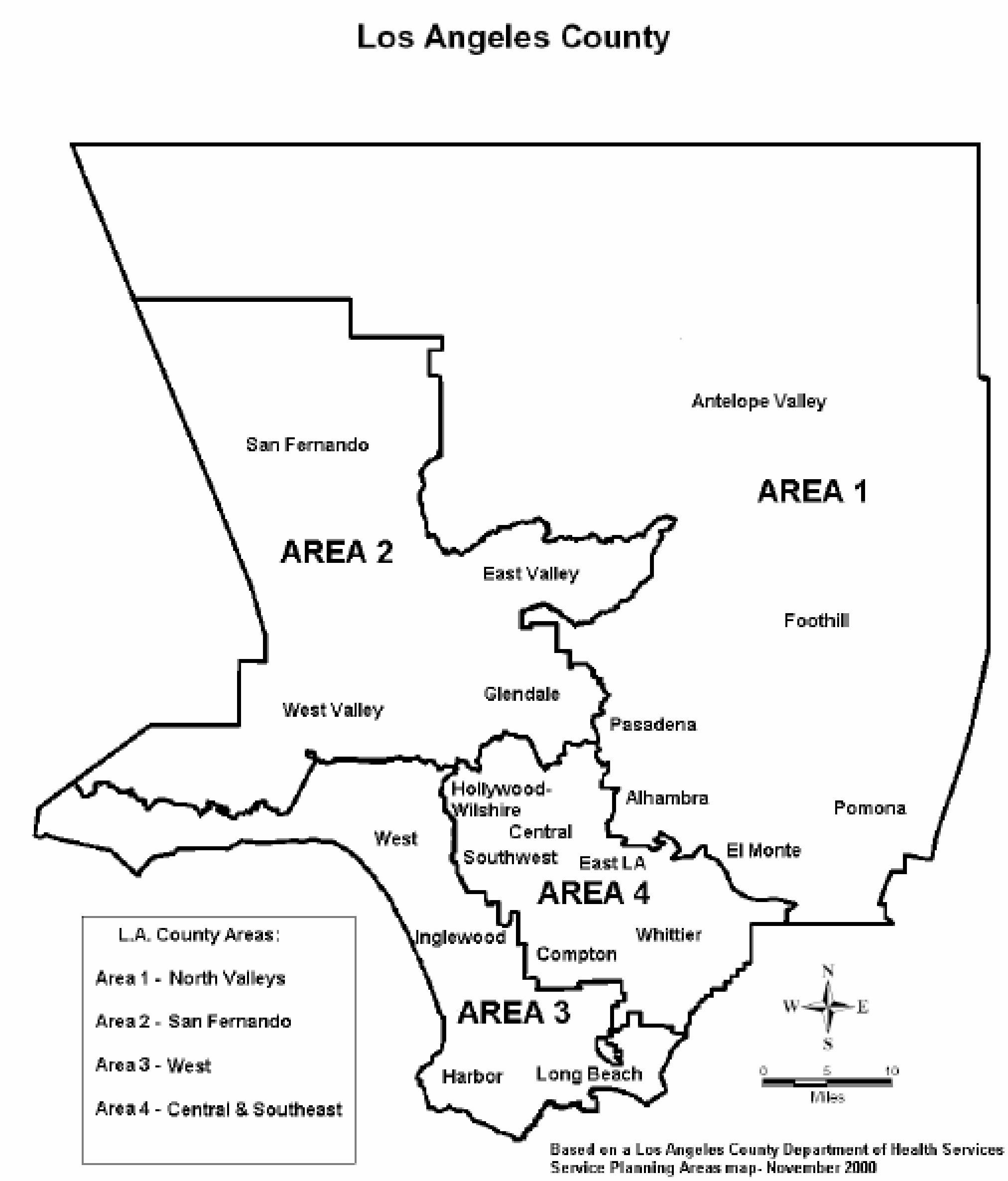
"The New Urban Studies"; Los Angeles scholars use their region and their ideas to end the dominance of the 'Chicago School'; By D.W. MILLER.

Recession

When asked to evaluate the LA County economy today, only 24 percent of residents rate it as excellent or good, while 48 percent say it is fair, and 27 percent poor. Half of county residents report that their area is in a mild (12%), moderate (25%), or serious (14%) recession, with Latinos (58%) and blacks (57%) more likely than whites (44%) to say their area is in recession. And far more residents today (67%) than just one year ago (52%) predict bad economic times for the state during the next 12 months. This economic angst is also taking its toll on residents' overall perception of the county:

- 40 percent of county residents say that the region is headed in the right direction, and 43 percent believe it is headed in the wrong direction, with whites, blacks, and San Fernando area residents more negative than others about the county's prospects.

- Residents are divided about whether the county will be a better or worse place to live in the future (32% each), with an equal percentage (31%) expecting little change.



Government Perceptions

Economic and social conditions — as well as the lingering effects of recent secession efforts — are also affecting attitudes about local government. Seventy-one percent of residents say that the county government is fair (49%) or poor (22%) at solving problems, while only 24 percent rate it as excellent or good. San Fernando area residents (28%) are more likely than others to view county government in a negative light. While more residents (39%) say their city governments are excellent or good at solving problems, a majority (54%) still gives them low ratings. Residents of LA City are far more critical than others. Given their disenchantment with government, LA residents are open to a number of proposals for reform. Given the vast differences in attitudes among racial and ethnic groups in LA County, it is not surprising that many residents are concerned about the state of race relations in the region. A majority of residents (53%) believes race relations are not so good (39%) or poor (14%) in the county today. Blacks (65%) are more negative than Latinos (58%), whites (50%), or Asians (45%).

Percent seeing the issue as a big problem in their part of Los Angeles County	All Adults	County Area: North Valleys	San Fernando	West	Central / Southeast
Traffic congestion on freeways and major roads	67%	64%	69%	70%	63%
Availability of housing that you can afford	54	47	52	57	59
Crime	41	32	36	38	55
Lack of opportunities for well-paying jobs	40	37	35	36	49
Population growth and development	38	34	43	37	37
Air pollution	37	30	34	32	47

Overall Outlook

Los Angeles County residents are in a sour mood when it comes to the state of the economy in California, the county, and their local areas. Two in three county residents predict bad economic times for California during the next 12 months. This is a considerably higher percentage than we found in PPIC Statewide Surveys in 2000, 2001, and 2002. These pessimistic views are shared across geographic, racial/ethnic, demographic, and political groups.

"Turning to economic conditions in California, do you think that during the next 12 months we will have good times financially or bad times?

	Los Angeles County Adults: Feb 00	Jan 01	Feb 02	Mar 03
Good times	77%	50%	38%	25%
Bad times	16	39	52	67
Don't know	7	11	10	8

When asked to evaluate the Los Angeles County economy today, only 24 percent of resident's rate it as excellent or good—48 percent say it is fair, and 27 percent rate it as poor. The low ratings are consistent across geographic areas and demographic groups.

As for their parts of Los Angeles County, half of county residents report their areas are now in a mild (12%), moderate (25%) or serious (14%) recession. The Central/Southeast area has the highest percentage of residents (58%) who say their part of the county is in a recession. Higher percentages of Latinos (58%) and blacks (57%) than whites (44%) say their areas are in a recession. Residents with lower incomes and less education and immigrants are also more likely than others to share this view.

Residents are divided about their overall outlook for the county: Forty percent say that Los Angeles County is headed in the right direction, and 43 percent believe that it is headed in the wrong direction. As for the future, 32 percent think the county will be a better place to live than it is today, 32 percent think it will be a worse place to live, and 31 percent think it will be about the same as now. Whites, blacks, and San Fernando area residents are more negative than others about the county's overall outlook. Concerning quality of life, 61 percent of Los Angeles County residents say things are going well, and 36 percent say they are not. More than one-third of residents in all four areas believe things are going badly. Although 51 percent see themselves living in the same neighborhood five years from now, 22 percent expect to be living elsewhere in the county, and 17 percent expect to be living outside the county. Younger and more educated residents are most likely to say they will move out of the county in the next five years.

"Do you think that things in Los Angeles County are generally going in the right direction or the wrong direction?

		County Area			
	All Adults	North Valleys	San Fernando	West	Central / Southeast
Right direction	40%	41%	37%	42%	41%
Wrong direction	43	40	49	42	42
Don't know	17	19	14	16	17

State Budget Deficit and Local Tax Increases

Only 3 percent of county residents identify the state budget deficit as the most important issue facing Los Angeles County. Nevertheless, 92 percent of county residents say they are very concerned (71%) or somewhat concerned (21%) that the state budget deficit will cause severe cuts in areas such as city and county government and local schools. This concern is shared across the county's major areas and racial/ethnic groups. Women tend to be more concerned than men that the deficit will cause severe cuts in local services: 77% are very concerned, compared to 64% of men. Majorities in all partisan groups are concerned about potential cuts. However, Democrats (78%) are more likely than independents (68%) and Republicans (66%) to be very concerned.

Los Angeles County residents are willing to raise certain new taxes to fund some local services in light of the large state budget deficit. For example, 64 percent of county residents favor new taxes on alcoholic beverages and cigarettes in order to fund county-level public health and medical emergency services. However, there are large partisan differences: 69 percent of Democrats, 60 percent of independents, and 52 percent of Republicans support new alcohol and cigarette taxes. Women (69%) are much more likely than men (60%) and those under age 35 (68%) are more likely than those ages 55 and older (57%), to favor these so-called "sin taxes". Some six in 10 residents in each of the four geographic areas would support this tax increase to fund county-level services.

Public Policy Institute of California; Special Survey of Los Angeles in collaboration with the University of Southern California; Mark Baldassare, Research Director & Survey Director

Impact

Economic downturns have a direct impact on schools and colleges. Every financial aspect is affected: (budgets, salaries, class sizes, instructional quality, special programs, learning materials, facility maintenance, new construction, personnel). Indirect affects include crime and behavior problems.

Biological & Health Emergencies

Biological/Health Emergencies were rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC

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

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

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

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

Department of Health Services

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

Community Health Services

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

Environmental Health Services

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

Department of Mental Health

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

Department of Public Social Services:

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

Department of Children and Family Services

The Department of Children and Family Services (DCFS) is responsible for the safety and well-being of the children in its care, and the children otherwise known as "unaccompanied minors" who may be left unsupervised as a result of a disaster.

Department of Community and Senior Services

The Department of Community and Senior Services (CSS) will manage and staff emergency shelters; contact high-risk IHSS clients; implement the Federal Repatriation Program; staff Disaster Services Centers using volunteers and contract agencies; provide public information through the Information and Referral network; and perform outreach and disaster assistance services through grants received from the California Departments of Aging and Social Services.

Health Hazards

Schools and school support systems have always been, and will continue to be, vulnerable to biological and health hazards, just by their nature as a gathering place for people from all around. Los Angeles County's population is mobile, not only locally, but globally; and the potential for introduction of disease is great. In schools, the public health system starts with teachers and parents. Schools experiencing unusual absenteeism because of a sickness or health issues must report these incidents to public health authorities. Epidemics have been averted because of early detection of a health problem in school children. On the other hand, if an epidemic or pandemic event occurs in one school, history has shown that it will affect the entire area unless drastic measures are taken to quarantine or stop the event.

Humans

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.

Equines

The California Department of Food and Agriculture confirmed 30 WNV equine cases from the counties of Alpine(1), Butte (1), Fresno (1), Orange (1), Riverside (12), Sacramento (4), San Bernardino (2), San Diego (1), Tehama (1), and Ventura (1) last week. This represents the first equine cases in the counties of Alpine, Butte, Orange, San Diego, and Ventura and the first indication of WNV in Alpine County-. Forty-eight horses have been euthanized or have died after being infected with WNV.

Dead Birds

The following eleven new counties detected WNV in dead birds last week: Calaveras (1), Lake (1), Lassen (1), Mariposa (1), Plumas (1), San Luis Obispo (1), San Mateo (1), Sierra (1), Sutter (2), Yolo (1), and Yuba (3). An additional 183 WNV positive dead birds were reported last week from Alameda (1), Butte (48), Contra Costa (1), El Dorado (2), Fresno (9), Glenn (5), Kern (3), Los Angeles (37), Mendocino (1), Orange (20), Placer (1), Riverside (1), Sacramento (16), San Diego (1), San Joaquin (2), Santa Barbara (1), Shasta (4), Solano (1), Sonoma (7), Stanislaus (3), Tehama (18), and Tulare (1). In 2004, a total of 1,447 WNV positive dead birds have been detected in California.

Mosquito Pools and Sentinel Chickens:

A total of 109 mosquito pools tested positive for WNV last week from Los Angeles (43), Orange (30), San Bernardino (26), Kern (4), Shasta (3), Riverside (1), Sacramento (1), and San Luis Obispo (1) counties, thus bringing the yearly total to 523. This represents the first positive mosquito activity reported in San Luis Obispo County. Fourteen chickens from Imperial (4), Los Angeles (3), and San Bernardino (7) counties seroconverted to WNV last week, bringing the yearly total to 214.

Summary of West Nile Virus Activity in California, 2004

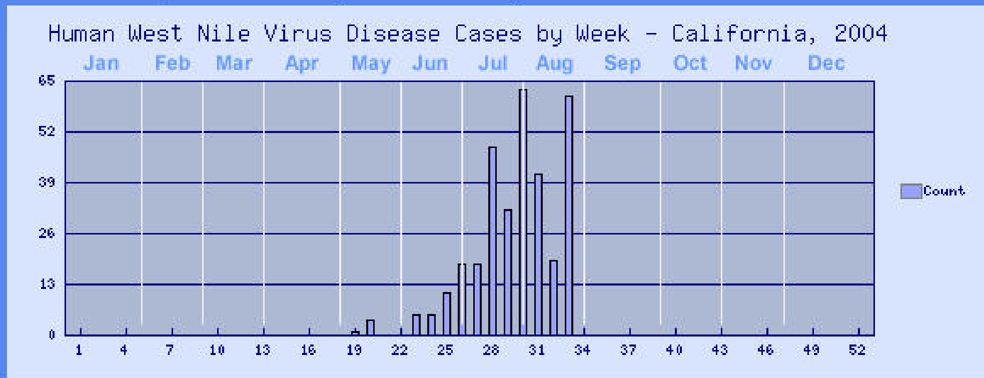
(Los Angeles and neighboring counties)

	Summary of West Nile Virus Activity in California, 2004				
	Humans	Equines	Dead Birds	Mosquito Pools	Sentinel Chickens
Los Angeles	124	4	763	240	37
Orange	19	1	127	95	-

	Summary of West Nile Virus Activity in California, 2004				
	Humans	Equines	Dead Birds	Mosquito Pools	Sentinel Chickens
Riverside	63	59	130	94	121
San Bernardino	119	25	284	121	95
San Diego	1	1	10	-	-
Santa Barbara	-	-	3	-	-
Santa Clara	-	-	21	-	-
Ventura	1	1	9	-	-
State Totals	**343**	**158**	**1,922**	**685**	**313**

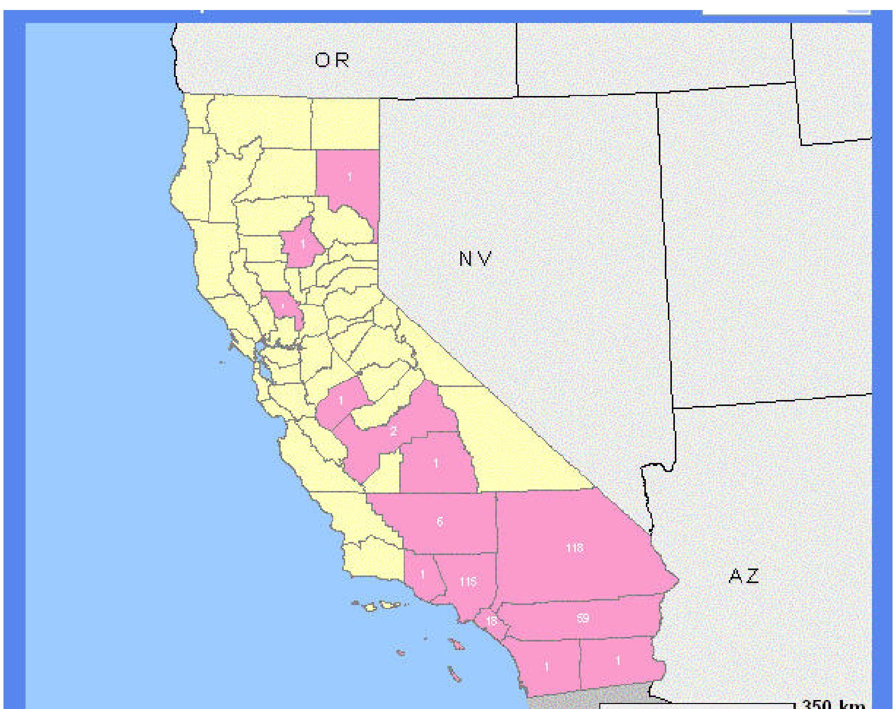
California West Nile Virus Surveillance Information Center

These data are provisional and may be revised or adjusted in the future.



Cumulative Human Disease Cases by County - California, 2004

Butte County	1
Fresno County	2
Imperial County	1
Kern County	6
Lassen County	1
Los Angeles County	115
Merced County	1
Orange County	18
Riverside County	59
San Bernardino County	118
San Diego County	1
Tulare County	1
Ventura County	1
Yolo County	1



Cumulative 2004 Data as of 3 am, Aug 31, 2004

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.

Surveillance for Human Cases

Because the primary public health objective of surveillance systems for neurotropic arboviruses is prevention of human infections and disease, human case surveillance alone should not be used for the detection of arbovirus activity, except in jurisdictions where arbovirus activity is rare, or resources to support avian-based and/or mosquito-based arbovirus surveillance are unavailable.

GOALS OF SURVEILLANCE FOR HUMAN CASES: To 1) assess the local, state and national public health impact of WNV disease and monitor national trends; 2) demonstrate the need for public health intervention programs; 3) allocate resources; 4) identify risk factors for infection and determine high-risk populations; 5) identify geographic areas in need of targeted interventions; and 6) identify geographic areas in which it may be appropriate to conduct analytic studies of important public health issues.

Recent Experience

1. In the U.S. during 1999-2002, the peak human risk for WN viral infection occurred in August and September, although in 2002 human illness onset was reported as early as mid-May and as late as mid-December. In many regions, the peak minimum infection rates in mosquitoes and a rapid increase in the number of reported avian and equine WN viral infections occurred just prior to the period of maximal human risk.

2. In 1999-2002, the majority of reported, confirmed, or probable cases of human WN viral disease were among persons with meningo-encephalitis. Testing of patients with aseptic meningitis or unexplained febrile illnesses for evidence of WN viral infection may be beneficial, but can also overwhelm laboratory testing capacity and appears to be of relatively low yield for surveillance purposes since the majority of these cases will not be due to WNV infection.

3. Most patients with WN encephalitis or meningitis (WNME) are older adults, generally over 50 years old. In the U.S. in 1999-2001, the median age among the 142 reported WNME cases was 68 years. In 2002, among 2,942 reported cases of WN meningo-encephalitis, the median age was 59 years. Although 21% of reported cases were in persons younger than 40, only 4% of reported cases were in persons younger than 18.

4. When WN viral infections were first identified in the U.S., WN encephalitis was associated with a Guillain-Barrè-like syndrome with generalized muscle weakness. In 1999-2000, generalized muscle weakness was reported in 29% of WN encephalitis cases. In 2002, at least 2 new neurological syndromes associated with WN viral infection were identified: acute flaccid paralysis (“WN poliomyelitis-like syndrome”) and brachial plexopathy.

5. Using CDC-recommended test methods in public health laboratories, WNV-specific IgM antibody was detected in acute-phase (i.e., those collected 8 or less days after illness onset) serum or CSF specimens, or both, in the large majority of confirmed cases. In contrast, only a small minority of suspected cases were subsequently confirmed in which specific IgM antibody reactivity in acute-phase serum or CSF was in the equivocal or low-positive range.

6. Longitudinal studies of WNME cases have shown that WNV-specific IgM antibody can persist in serum for 12 months or longer.[43] Thus, the presence of WNV-specific IgM antibody in a single serum sample is not necessarily diagnostic of *acute* WN viral infection. For this reason, especially in areas where WNV is known to have circulated previously, suspected, acute WN viral disease cases should be confirmed by observing a fourfold or more change in titer of WNV-specific antibody in serum and the presence of WNV-specific IgM antibody in CSF, when available.

7. In 1999 in the U.S., the sensitivity of polymerase chain reaction (PCR) tests of CSF for the diagnosis of human WN encephalitis cases was only 57%; more recent statistics are currently unavailable. Thus, PCR for the diagnosis of WN viral infections of the human central nervous system (CNS) continues to be experimental and should not replace tests for the detection of WNV-specific antibody in CSF and serum, tests that are far more sensitive.

8. During 1999-2001, 7 cases of uncomplicated WN fever (WNF) were reported in the U.S., which represents 5% of the total number of WNV disease cases reported. In 2002, over 1,100 WNF cases were reported (30% of total). Contributing factors likely include the intensive media attention paid to the 2002 epidemic that may have led to increased consumer demand for WNV diagnostic testing by patients and physicians, and the greater availability of commercial testing. Nevertheless, during 1999-2002, WNF was probably significantly under-diagnosed in the U.S. It has been estimated that approximately 20 WNF cases occur for every WNME case.

9. For suspected WNV disease cases in immuno-compromised patients, WNV-specific antibody may not be present. Since longer viremias may be observed in these patients, testing serum and CSF samples for the presence of virus or viral RNA may be useful.

Vector Control

A surveillance program adequate to monitor WNV activity levels associated with human risk must be in place. Detection of epizootic transmission of enzootic arboviruses typically precedes detection of human cases by several days to 2 weeks or longer (e.g., as found in SLE epidemics). If adequate surveillance is in place, the lead time between detecting significant levels of epizootic transmission and occurrence of human cases can be increased, which will allow for more effective intervention practices. Early-season detection of enzootic or epizootic WNV activity appears to be correlated with increased risk of human cases later in the season. Control activity should be intensified in response to evidence of virus transmission, as deemed necessary by the local health departments.

Such programs should consist of public education emphasizing personal protection and residential source reduction; municipal larval control to prevent repopulation of the area with competent vectors; adult mosquito control to decrease the density of infected, adult mosquitoes in the area; and continued surveillance to monitor virus activity and efficacy of control measures.

As evidence of sustained or intensified virus transmission in an area increases, emergency response should be implemented. This is particularly important in areas where vector surveillance indicates that infection rates in *Culex* mosquitoes are increasing, or that potential accessory vectors (e.g., mammalophilic species) are infected with WNV. Delaying adulticide applications in such areas until human cases occur is illogical and negates the value and purpose of the surveillance system.

Adult Mosquito Control Recommendations

Ground-based (truck-mounted) application of adult mosquito control agents has several positive attributes. Where road access is adequate, such as in urban and suburban residential areas, good coverage may be achieved. In addition, ground-based application can be done throughout the night, thereby targeting night-active mosquito species. Such applications are prone to skips and patchy coverage in areas where road coverage is not adequate or in which the habitat contains significant barriers to spray dispersal and penetration.

Aerial application is capable of covering larger areas in shorter time periods than a ground-based application. This is a critical positive attribute when large residential areas must be treated quickly. In addition, aerial application is less prone to patchy coverage than ground-based application in areas where road coverage is not adequate. One limitation of aerial application is that many applicators will not fly at night, potentially reducing the effectiveness of the applications in Culex species control efforts.

Cost benefits of aerial application over ground application may not be realized unless relatively large areas are treated.

Several formulations of a variety of active ingredients are available for adulticide applications. Material choice for ground-based or aerially applied mosquito control in public health emergency situations is limited by EPA restrictions on the pesticide label and applicable state and local regulations.

Multiple applications will likely be required to appreciably reduce Culex populations and interrupt arbovirus transmission. An emergency SLE virus response plan developed for New Orleans, Louisiana[63] indicates the need for repeated applications to control Cx.quinquefasciatus, and the need to repeatedly apply adulticides in high-risk areas (areas with human cases or positive surveillance events). Two to three adulticide applications spaced 3-4 days apart may be required to significantly reduce Cx. pipiens populations. Effective surveillance must be maintained to determine if and when re-treatment is required to maintain suppression of the vector populations.

Urban/suburban population centers with multiple positive surveillance events as described above should be treated first to most efficiently protect the largest number of people from exposure to WNV. Applications should be timed to coincide with the peak activity periods of the target species. For example, applications should be made at night to maximize control of night-active Culex species. Other species such as Oc. sollicitans or Ae. vexans are active shortly after sunset and are effectively controlled with appropriately timed applications. Day-active potential accessory vectors (e.g., Oc. japonicus, Oc. triseriatus,

Ae. albopictus) must be addressed separately and are most effectively controlled by residential source reduction efforts, though there is preliminary evidence that early morning ULV applications may be used to control these species.

Centers for Disease Control and Prevention, "Epidemic/Epizootic West Nile Virus in the United States: Guidelines for Surveillance, Prevention, and Control"; U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Infectious Diseases, Division of Vector-Borne Infectious Diseases, Fort Collins, Colorado, 3rd Revision, 2003

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 and report from the Department of Health, Taiwan 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.

Mad Cow Disease (Creutzfeldt-Jakob disease (vCJD)**)**

Background

New variant CJD (vCJD) is a rare, degenerative, fatal brain disorder in humans. Although experience with this new disease is limited, evidence to date indicates that there has never been a case of vCJD transmitted through direct contact of one person with another. However, a case of probable transmission of vCJD through transfusion of blood components from an asymptomatic donor who subsequently developed the disease has been reported.

As of December 1, 2003, a total of 153 cases of vCJD had been reported in the world: 143 from the United Kingdom, six from France, and one each from Canada, Ireland, Italy, and the United States (note: the Canadian, Irish, and U.S. cases were reported in persons who resided in the United Kingdom during a key exposure period of the U.K. population to the BSE agent).

Almost all the 153 vCJD patients had multiple-year exposures in the United Kingdom between 1980 and 1996 during the occurrence of a large UK outbreak of bovine spongiform encephalopathy (BSE, commonly known as mad cow disease) among cattle.

There has never been a case of vCJD that did not have a history of exposure within a country where this cattle disease, BSE, was occurring.

It is believed that the persons who have developed vCJD became infected through their consumption of cattle products contaminated with the agent of BSE. There is no known treatment of vCJD and it is invariably fatal.

Since 1996, evidence has been increasing for a causal relationship between ongoing outbreaks in Europe of a disease in cattle, called bovine spongiform encephalopathy (BSE, or "mad cow disease"), and a disease in humans, called variant Creutzfeldt-Jakob disease (vCJD). Both disorders are invariably fatal brain diseases with unusually long incubation periods measured in years, and are caused by an unconventional transmissible agent.

On December 23, 2003, the U.S. Department of Agriculture (USDA) announced a presumptive diagnosis of bovine spongiform encephalopathy (BSE, or "mad cow" disease) in an adult Holstein cow from Washington State. The diagnosis was confirmed by an international reference laboratory in Weybridge, England, on December 25. Preliminary trace-back based on an ear-tag identification number suggests that the BSE-infected cow was imported into the United States from Canada in August 2001.

Description

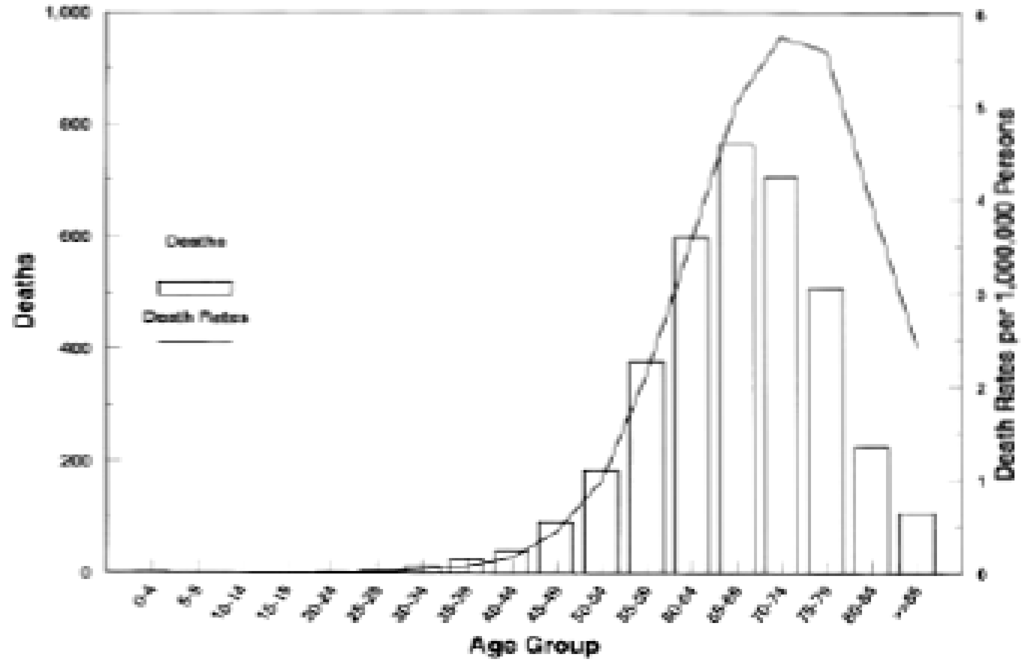
Since 1996, strong evidence has accumulated for a causal relationship between ongoing outbreaks in Europe of disease in cattle called bovine spongiform encephalopathy (BSE, or "mad cow disease") and a disease in humans originally called new variant Creutzfeldt-Jakob disease or more recently simply variant CJD (vCJD). Both disorders are invariably fatal brain diseases with unusually long incubation periods measured in years and are caused by an unconventional transmissible agent. Although there is very strong evidence that the agent responsible for the human disease is the same agent responsible for the BSE outbreaks in cattle, the specific foods that might be associated with the transmission of this agent from cattle to humans are unknown. However, bioassays have identified the presence of the BSE agent in the brain, spinal cord, retina, dorsal root ganglia (nervous tissue located near the backbone), distal ileum, and the bone marrow of cattle experimentally infected with this agent by the oral route.

In addition to cattle, sheep are susceptible to experimental infection with the BSE agent by the oral route. Thus, in countries where flocks of sheep and goats may have been exposed to the BSE agent through contaminated feed, a theoretical risk exists that these animals might have developed infections caused by the BSE agent and that these infections are being maintained in the flocks, even in the absence of continued exposure to contaminated feed (for example, through maternal transmission). Regardless, as of July 2002, cattle remain the only known food animal species with disease caused by the BSE agent.

U.S. Surveillance for CJD

The Centers for Disease Control and Prevention (CDC) monitors the trends and current incidence of CJD in the United States by analyzing death certificate information from U.S. multiple cause-of-death data, compiled by the National Center for Health Statistics, CDC. By 3- or 4-year periods from 1987 through 2001, the average annual death rates of CJD (not vCJD) have remained relatively constant, ranging from 0.95 cases per 1 million in 1999-2001 to 1.14 cases per 1 million in 1995-1998. In addition, deaths from non-iatrogenic CJD in persons aged <30 years in the United States remain extremely rare (<5 cases per 1 billion per year). In contrast, in the United Kingdom, over half of the patients who died with vCJD were in this young age group.

In addition, CDC collects, reviews and, when indicated, actively investigates reports by health care personnel or institutions of possible CJD or vCJD cases. Also, in 1996-97, CDC established, in collaboration with the American Association of Neuro-pathologists, the National Prion Disease Pathology Surveillance Center at Case Western Reserve University, which performs special diagnostic tests for prion diseases, including post-mortem tests for vCJD.



Creutzfeldt-Jakob disease deaths and death rates by age group. United States, 1979 through 1994.

California Creutzfeldt-Jakob Disease (CJD) Surveillance Project

The California Creutzfeldt-Jakob Disease Surveillance Project is funded by the federal Centers for Disease Control and Prevention (CDC) through the California Emerging Infections Program (EIP) to improve the public health capacity to detect cases of CJD. In 1996, the first cases of variant CJD occurring in unusually young persons and resulting from ingestion of bovine spongiform encephalopathy (BSE)-contaminated beef were identified in the United Kingdom. Since then, the CDC and the EIP have conducted enhanced surveillance and death certificate reviews. National surveillance has indicated that the incidence of CJD in the United States is about 1 case per million population per year (JAMA, Vol. 284, No. 18, November 8, 2000). Recently, one confirmed case of variant CJD was identified in a Florida resident and another in a Canadian resident, both of whom resided in the United Kingdom during the height of the BSE epidemic. In addition, the identification of chronic wasting disease (CWD), a form of transmissible spongiform encephalopathy affecting deer and elk in the mid-western United States, has led to heightened awareness and surveillance efforts for any associated potential human public health risks.

CDC Dispatch, Vol. 2, No. 4—October-December 1996 Emerging Infectious Diseases

Influenza (Flu)

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

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

Biology of Influenza

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

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

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

Hoof & Mouth Disease

In the United States we usually call it "Hoof and Mouth Disease". In the U.K. they call it "Foot and Mouth Disease". But, wherever it appears, and whatever it's called, this highly contagious livestock disease means trouble. The outbreak of the disease in Great Britain quickly spread to the European continent, and British officials even considered eradicating that country's entire livestock population. The last major outbreak in the U.S. was in 1929.

Hoof and mouth disease is a viral infection that afflicts animals with cloven hooves such as cattle, pigs, and sheep. Onset of the disease is characterized by fever, which is followed by the development of blisters inside the mouth and on the feet. It is transmitted easily among animals through fluids such as blood, saliva, and milk. Fluid from broken blisters has especially high concentrations of the virus. The disease is not necessarily fatal, and symptoms can clear up after several weeks, but the disease generally leaves animals underweight and sometimes disabled. Because of the highly infectious nature of the disease, and the condition in which it leaves animals even after they have recovered, farmers almost always destroy infected animals and burn their carcasses.

While not susceptible to the hoof and mouth, humans can carry and transmit the disease without even realizing it. This makes an already highly contagious disease even more difficult to contain. Governments can control the export and import of farm animals, and can destroy animals possibly exposed to the disease, but confining the human carriers of the virus is much more difficult.

This disease is explained further under "**Agricultural Loss**".

Hepatitis

Hepatitis is inflammation of the liver. Several different viruses cause viral hepatitis. They are named the hepatitis A, B, C, D, and E viruses.

All of these viruses cause acute, or short-term, viral hepatitis. The hepatitis B, C, and D viruses can also cause chronic hepatitis, in which the infection is prolonged, sometimes lifelong.

Other viruses may also cause hepatitis, but they have yet to be discovered and they are obviously rare causes of the disease.

Hepatitis Incidence/Epidemiology

Hepatitis A occurs sporadically and epidemically worldwide, with a tendency to cyclic recurrences.

Epidemics are uncommon in developing countries where adults are generally immune. Improved sanitation and hygiene conditions in different parts of the world leave large segments of the population susceptible to infection, and outbreaks may result whenever the virus is introduced.

Common-source epidemics, related to contaminated food or water, may evolve explosively, as did the largest mollusk-linked epidemic in Shanghai, in 1988, involving about 300 000 people.

Worldwide, HAV infections account for 1.4 million cases annually.

Strain	Disease Spread	People at Risk	Prevention	Treatment
Hepatitis A	Primarily through food or water contaminated by feces from an infected person. Rarely, it spreads through contact with infected blood	International travelers; people living in areas where hepatitis A outbreaks are common; people who live with or have sex with an infected person; during outbreaks, day care children and employees, men who have sex with men, and injection drug users	The hepatitis A vaccine, also, avoiding tap water when traveling internationally and practicing good hygiene and sanitation	Hepatitis A usually resolves on its own over several weeks
Hepatitis B	Through contact with infected blood, through sex with an infected person, and from mother to child during childbirth	People who have sex with an infected person, men who have sex with men, injection drug users, children of immigrants from disease-epidemic areas, infants born to infected mothers, people who live with an infected person, health care workers, hemodialysis patients, people who received a transfusion of blood or blood products before July 1992 or clotting factors made before 1987, and international travelers	Hepatitis B vaccine	For chronic hepatitis B: drug treatment with alpha interferon, peginterferon, lamivudine, or adefovir dipivoxil. Acute hepatitis B usually resolves on its own. Very severe cases can be treated with lamivudine
Hepatitis C	Primarily through contact with infected blood, less commonly, through sexual contact and childbirth	Injection drug users, people who have sex with an infected person, people who have multiple sex partners, health care workers, infants born to infected women, hemodyalysis patients, and people who received a transfusion of blood or blood products before July 1992 or clotting factors made before 1987	There is no vaccine for hepatitis C; the only way to prevent the disease is to reduce the risk of exposure to the virus. This means avoiding behaviors like sharing drug needles or sharing personal items like toothbrushes, razors, and nail clippers with an infected person	Chronic hepatitis C: drug treatment with perginterferon alone or combination treatment with peginterferon and the drug ribavirin. Acute hepatitis C: treatment is recommended if it does not resolve within 2 to 3 months
Hepatitis D	Through contact with infected blood. This disease occurs only in people who are already infected with hepatitis B	Anyone infected with hepatitis B: injection drug users who have hepatitis B have the highest risk. People who have hepatitis B are also at risk if they have sex with a person infected with hepatitis D or if they live with an infected person. Also at risk are people who received a transfusion of blood or blood products before July 1992 or clotting factors made before 1987	Immunization against hepatitis B for those not already infected; also. avoiding exposure to infected blood, contaminated needles, and an infected person's personal items.	Chronic hepatitis D: drug treatment with alpha interferon
Hepatitis E	Through food or water contaminated by feces from an infected person. This disease in uncommon in the United States	International travelers; people living in areas where hepatitis E outbreaks are common; and people who live or have sex with an infected person	There is no vaccine for hepatitis E; the only way to prevent the disease is to reduce the risk of exposure to the virus. This means avoiding tap water when traveling internationally and practicing good hygiene and sanitation	Hepatitis E usually resolves on its own over several weeks or months

Hepatitis Facts

- An estimated 40,000 people were infected with the hepatitis C virus (HCV) in 1998.

- There are an estimated 3.9 million people who are or have been infected with hepatitis C, 2.7 of whom are chronically infected; approximately 70% of people infected do not know they have the virus.

- 8,000 – 10,000 people die of hepatitis C each year. The Centers for Disease Control and Prevention (CDC) estimate that the number of annual deaths from hepatitis C will triple in the next 10 –20 years.

- Hepatitis B is responsible for 5,000 deaths annually, including 3,000 – 4,000 from cirrhosis and approximately 1,000 – 1,500 from primary liver cancer.

- One out of every 250 people is a carrier of hepatitis B and can pass it on to others, often unknowingly.

- There were approximately 80,000 estimated new infections of hepatitis B in the United States in 1999.

- Up to 90% of pregnant women who are carriers of the hepatitis b virus could transmit the virus to their children. Vaccinations of the newborns would prevent them from becoming carriers.

- Due to the screening of pregnant women for HBV and vaccinations of newborns with the hepatitis B vaccine, there has been a decline in that number of infected newborns.

- Hepatitis B is 100 times more infectious than HIV, the virus that causes AIDS. There are 500 million hepatitis B viral particles in one teaspoon of blood compared to 5-10 HIV particles.

- The estimated medical and work loss cost per year of hepatitis B is $700 million; the estimated medical and work loss cost per year of hepatitis C is $600 million.

- One out of every 20 people will be infected with hepatitis B in his/her lifetime.

- Approximately 5,000 liver transplants were performed in 2000. Because of the shortage of organs, it is estimated that nearly 1,700 prospective recipients died in 2001 while waiting for a liver for transplantation. There are currently over 18,000 people waiting for a liver transplant.

- Non-Hispanic African Americans have the highest infection rate for hepatitis C; Asian and Pacific Islanders have the highest rate for hepatitis B infection.

Other Diseases

Plague

Plague is transmitted to humans by fleas or by direct exposure to infected tissues or respiratory droplets; the disease is characterized by fever, chills, headache, malaise, prostration, and leukocytosis that manifests in one or more of the following principal clinical forms:

- Regional lymphadenitis (bubonic plague)

- Septicemia without an evident bubo (septicemic plague)

- Plague pneumonia, resulting from hematogenous spread in bubonic or septicemic cases (secondary pneumonic plague) or inhalation of infectious droplets (primary pneumonic plague)

- Pharyngitis and cervical lymphadenitis resulting from exposure to larger infectious droplets or ingestion of infected tissues (pharyngeal plague)

Brucellosis

Brucellosis is an infectious disease caused by the bacteria of the genus *Brucella*. These bacteria are primarily passed among animals, and they cause disease in many different vertebrates. Various *Brucella* species affect sheep, goats, cattle, deer, elk, pigs, dogs, and several other animals. Humans become infected by coming in contact with animals or animal products that are contaminated with these bacteria. In humans brucellosis can cause a range of symptoms that are similar to the flu and may include fever, sweats, headaches, back pains, and physical weakness. Sever infections of the central nervous systems or lining of the heart may occur. Brucellosis cab also cause long-lasting or chronic symptoms that include recurrent fevers, joint pain, and fatigue.

Brucellosis is not very common in the United States, where100 to 200 cases occur each year. But brucellosis can be very common in countries where animal disease control programs have not reduced the amount of disease among animals.

Botulism (Food-borne)

Ingestion of botulinum toxin results in an illness of variable severity. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Botulism (Wound)

An illness resulting from toxin produced by *Clostridium botulinum* that has infected a wound. Common symptoms are diplopia, blurred vision, and bulbar weakness. Symmetric paralysis may progress rapidly.

Water/Waste Water Emergency

Water/Waste Water Disruption were rated a MODERATE PRIORITY HAZARD in SMMSD & SMC

Water

With a growing population and economy, increasing environmental concerns and vibrant agriculture industry at play, how we choose to collect, store, distribute, use and dispose of water has never been more critical.

Every drop of water not used by a household, farm or business can be used to create higher river flows to benefit fisheries and floodways. Likewise, recycled water stored in new reservoirs can be used to recharge over-drafted groundwater aquifers. In short, new and innovative ideas are on the table that will help California rework its waterworks so that it is not necessary to choose between the environment, the economy, and people's livelihoods and lifestyles.

From the northern reaches to the San Joaquin Delta, which provides two-thirds of the state's residents with their drinking water, California is under the gun to reconstruct and rehabilitate its water and wastewater systems. The challenge is being met on many fronts. On these pages you will find a summary of the water and wastewater challenges California faces today, along with the lowdown on solutions in the works.

Problems

Our groundwater basins are over-drafted and our existing surface storage cannot meet future water demands, particularly in times of drought.

The gap between water supply and demand in California is predicted to total 2.4 million acre feet during drought years and up to 6.2 million acre feet in drought years by 2020. (An acre foot is enough to meet the annual needs of between one and two households.) Six million feet is roughly triple the amount of water the Bay Area uses in a year. At the same time, growers, manufactures and businesses are demanding more reliable and better quality water.

It can take 20 years or longer to develop and finance a supplemental water supply for new developments. About 894 gallons of water are needed to grow the food for the daily diet of an average person. On an annual basis, an individual's water use is about 326, 310 gallons. Some of our cities rely on water mains and sewers that are more than 100 years old.

In 2001 California officials issued more than 2,000 beach closings and health advisories because of sewer spills and overflows. Spills and overflows typically happen because wastewater systems have not been upgraded to facilitate new growth, and sewer pipes have not been replaced in time to avert a main break. When it rains, at times as little as one-quarter inch, the volume of combined runoff and wastewater becomes too great for sewage treatment plants to handle, and the flow is diverted to outfall points that discharge raw sewage, toxic industrial waste and floatables such as garbage and syringes. California needs an estimated $8.4 billion for local wastewater treatment improvements.

Solutions - Water

Through a state/federal partnership known as CALFED, for example, some $10 billion in expanded storage, increased recycling and conservation, ecological restoration of key watersheds, and improved water distribution and conveyance has been identified that over the next few decades help meet some of these challenges. Cities are expanding wastewater treatment systems, improving water distribution infrastructure, and developing local recycling programs as well, some using funds from the CALFED program.

To offset water shortages, the state's water recycling program needs more investment. In 1998, the last year it revised its state Water Plan, the California Department of Water Resources issued a 10-year capital improvement forecast calling for more than $1.6 billion in spending to ensure delivery of clean water. In addition, a state/federal partnership known as CALFED is overseeing a vast reworking of the state's water storage and distribution system. The CALFED program as it is known foresees $10 billion in environmental and ecological restoration projects, new storage facilities, recycling programs, water transfer arrangements to help strike a balance the state's competing water needs.

Solutions - Wastewater

State and federal water quality regulations require cities and other municipalities to upgrade wastewater treatment and distribution systems to prevent overflows during wet weather no later than 2014. Pipe replacement projects, construction of new retention ponds, increased recycling and conservation programs, and expanded treatment facilities are all part of the mix of solutions.

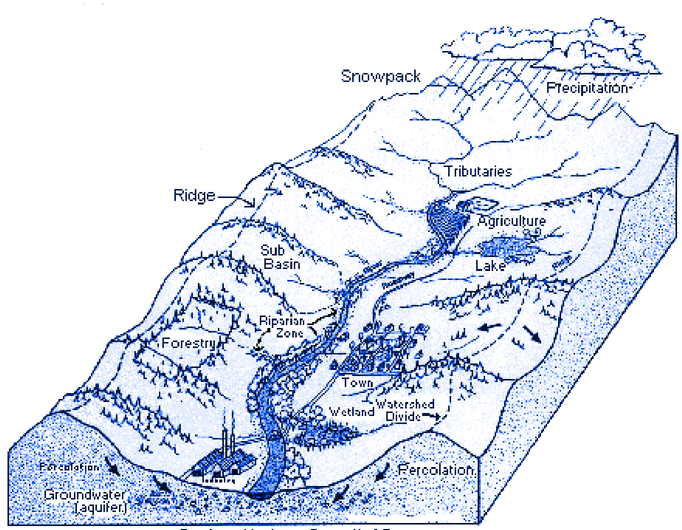
California Dept. of Water Resources, Water Education Foundation, Natural Resources Defense Council

Water Sheds

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. John Wesley Powell, scientist geographer, put it best when he said that a watershed is:

"that area of land, a bounded hydrologic system, within which all living things are inextricably linked by their common water course and where, as humans settled, simple logic demanded that they become part of a community."

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

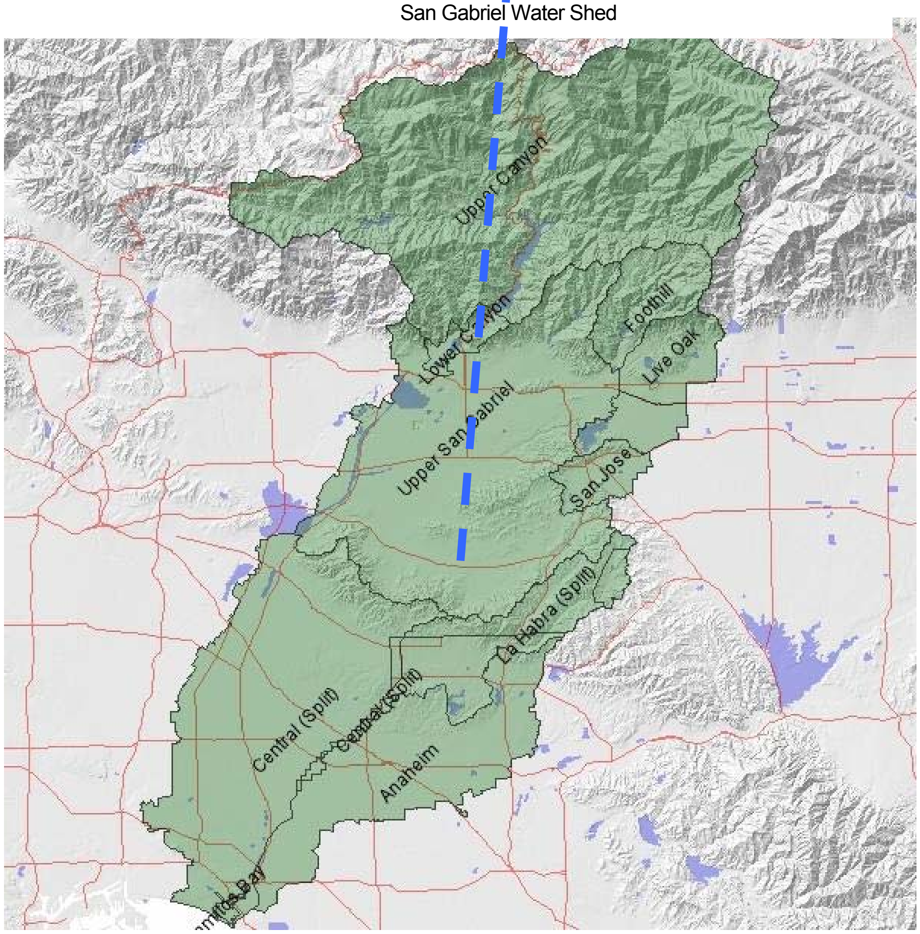


Produced by Lane Council of Governments

There are 6 water sheds serving Los Angeles County; Antelope-Fremont Valleys, Santa Clara, Los Angeles, San Gabriel, Santa Monica Bay, and San Pedro/Channel Islands (see map on next page). The map below shows the area of South Coast Water Sheds.

Watersheds in Los Angeles County

San Gabriel Water Shed



Water System 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.

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
- A change that can cause water of unusable quality contaminate good waterIn coastal basins, salt water intrusion can occur.

Generally, any withdrawal in excess of safe yield (the amount that can be withdrawn without producing an undesirable result) is an overdraft.

Drawdown differs significantly from overdraft. It results in a temporarily lowered water table generally caused by pumping. In this situation, the water table recovers when the supply is replenished.

Subsidence is one of the dramatic results from over-pumping. As the water table declines, water pressure is reduced. This causes the fine particles that held water to become compacted. In addition to permanently reducing storage capacity, the land above the aquifer can sink ... from a few inches to several feet ... causing a sinkhole. This can damage property and fields.

Inorganic compounds, pathogens and organic compounds can harm water quality, affecting the health of humans, fish and wildlife. Scientists continually learn more about contaminants, their sources and prevention practices.

Each state is responsible for designating uses for groundwater, surface waters, wetlands, etc. Designated uses include fishable, swim able, drinkable, recreational, agricultural, aquatic life, and more. Each state is also responsible for developing water quality standards for each use. For example, while most rivers are designated to be used for fishing, a few river sections are designated to be used for drinking water. The same is true for groundwater. Uses are defined and standards identified. A few groundwater uses and standards are:

- Drinking water
- Meet MCL* for pollutants
- Industrial process
- Quality & quantity criteria
- Stream 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 napthaline and phenol; PCBs and pesticides.

Potential Sources

Point sources are easily identified because they usually come out of a "pipe”. Examples include sewage treatment plants, large injection wells, industrial plants, livestock facilities, landfills, and others. Regulated by the state water quality agency and the U.S. EPA, point sources are issued a National Pollutant Discharge Elimination System (NPDES) permit when they meet regulations.

Many point sources were established generations ago, before the threat they posed was understood. Some of these sources have been "grandfathered" into compliance with some regulations. Thus, you may find some point sources located in areas that would be considered inappropriate now.

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

Nonpoint sources are not required to have a permit. Individually, each may not be a serious threat, but together they may be a significant threat.

Other sources that aren't classified under point or nonpoint sources include underground petroleum storage systems and many large and small businesses like dry cleaners, restaurants, and automotive repair shops. Although a large number of underground storage tanks have been removed or upgraded, a significant number remain. Businesses can threaten groundwater with a wide variety of potentially contaminating substances.

Groundwater Contaminant Sources

Source	Contaminant
Salting practices & storage	Chlorides
Snow dumping	Chlorides
Agricultural fertilizers	Nitrates
Manure handling	Nitrates, pathogens
Home fertilizer	Nitrates
Septic systems	Nitrates, pathogens
Urban landscapes	Hydrocarbons, pesticides, pathogens
Agricultural dealers	Hydrocarbons, pesticides, nitrates
Agricultural feedlots	Nitrates, pathogens
Solid waste landfills	Hazardous materials
Industrial uses RCRA 'C'	Hazardous materials
Industrial uses RCRA 'D'	Hazardous materials
Small quantity generators	Hazardous materials
Households	Hazardous materials
Gas stations	Hydrocarbons
Auto repair shops	Hydrocarbons
Recycling facilities	Hydrocarbons
Auto salvage yards	Hydrocarbons
Underground storage tanks	Hydrocarbons
Industrial floor drains	Hydrocarbons
Injection wells	Hydrocarbons
Junkyards	Hydrocarbons

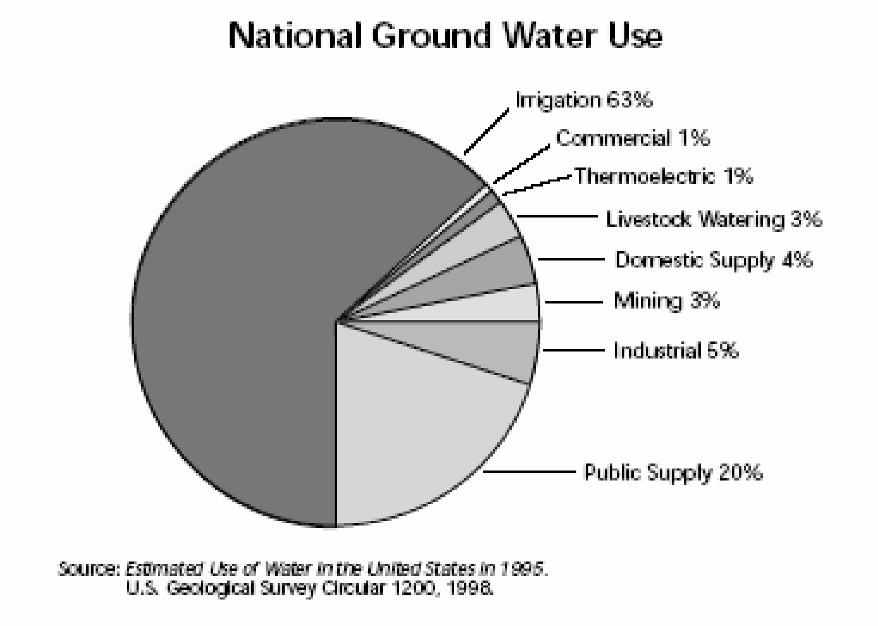
Groundwater Protection Tools

Technique	Tool

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



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.

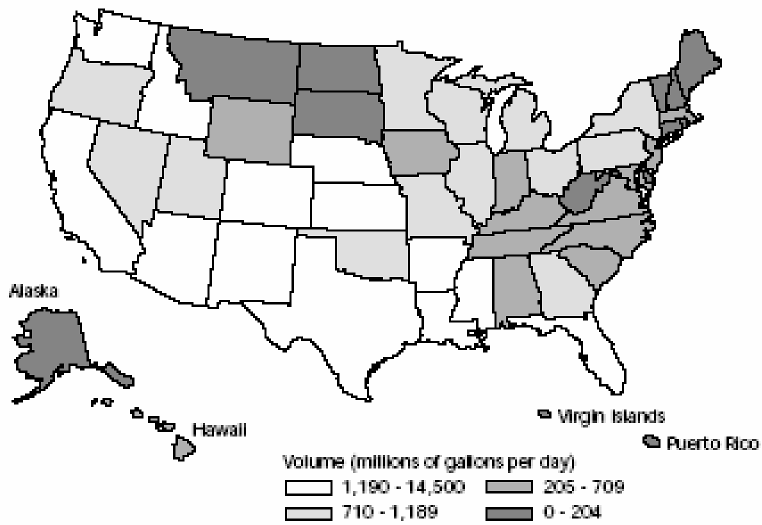
Every state uses some amount of ground water. Nineteen states obtain more than 25% of their overall water supply from ground water. Ten states obtain more than 50% of their total water supply from ground water.

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



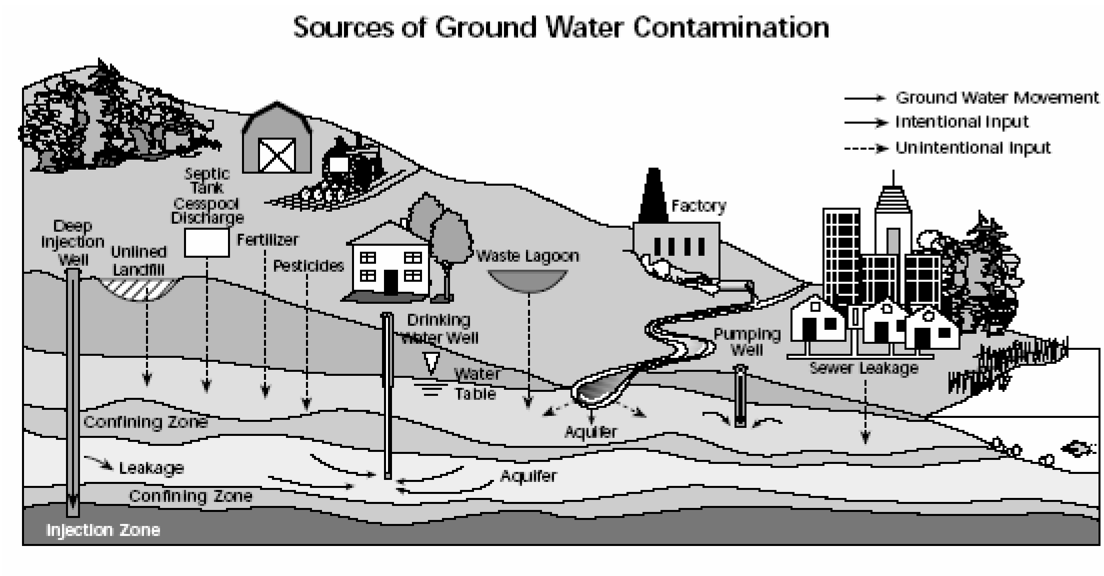
Source: *Estimated Use of Water in the United States in 1995.* U.S. Geological Survey Circular 1200, 1998.

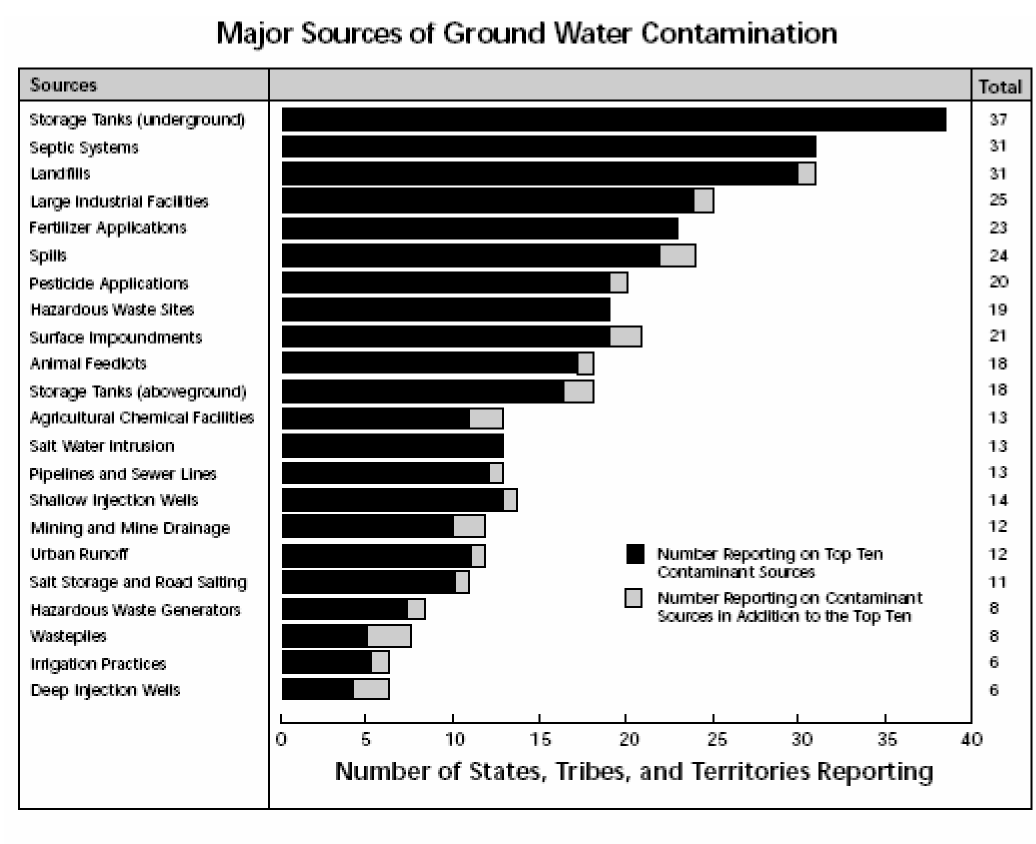
Sources of Ground Water Contamination

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
- Hydrogeologic sensitivity (the ease with which contaminants enter and travel through soil and reach aquifers)
- The findings of the state's ground water assessments and/or related studies.





EPA,
"National Water Quality Inventory"

Methyl Tertiary Butyl Ether (MTBE)

Senate Bill 521 was introduced February 24, 1997 in response to a growing awareness of the possible environmental and health effects associated with the use of Methyl Tertiary Butyl Ether (MTBE) as an oxygenate blending agent in gasoline fuels throughout California (Appendix A). Since 1979, MTBE had been used in the State as a replacement for tetraethyl lead and as an octane booster. Although used in California since 1979 in volumes ranging from 0.5 to 3.5 percent, the volumes of MTBE in gasoline have increased to 11 percent since 1996. SB 521, which became effective January 1, 1998, called for the University of California to perform an assessment of the benefits and risks associated with the uses of MTBE in California.

This assessment report addresses: 1) the current impacts of MTBE to the state's groundwater used for drinking; 2) risks to the state's groundwater resources associated with MTBE leaking from storage tanks and other petroleum storage and conveyance facilities; and 3) potential future risks to the state's groundwater should MTBE continued to be used.

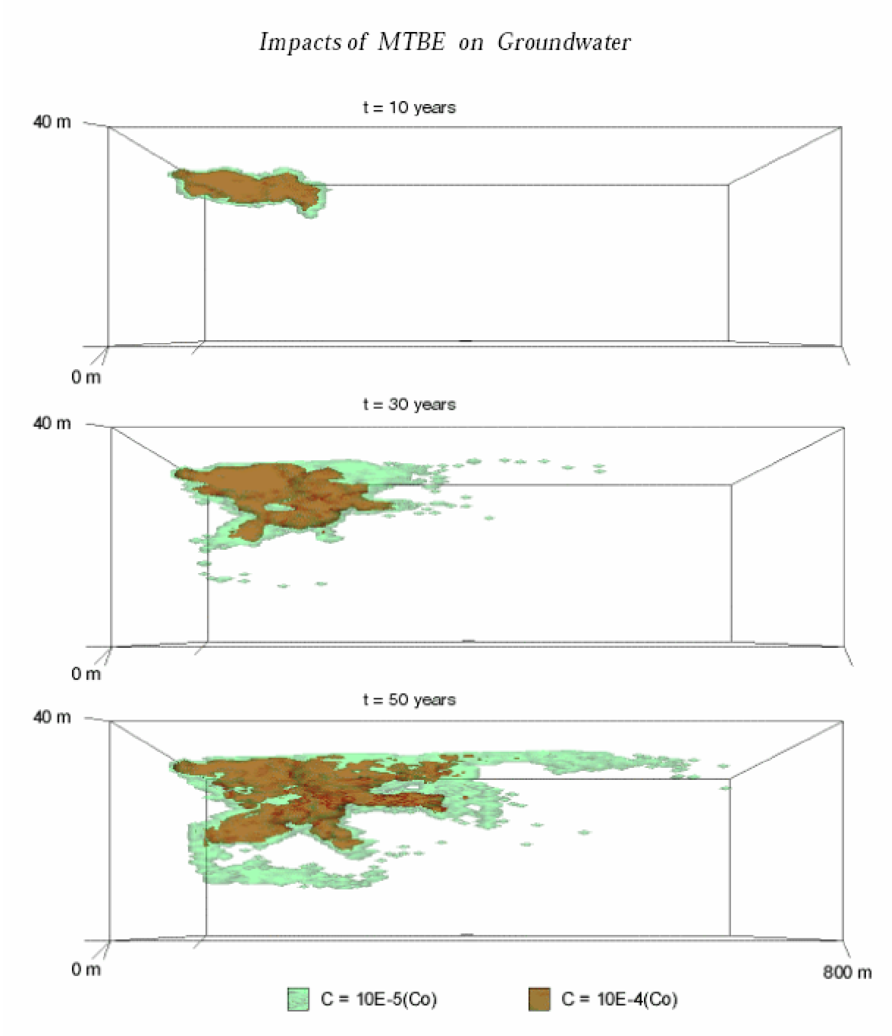
The general approach was to compile statewide data on the occurrence of MTBE groundwater contamination. The data consisted of MTBE detections and concentrations at leaking underground storage tank sites from Regional Water Quality Control Boards and MTBE detections and concentrations in water supply wells based on information from the Department of Health Services, Local Primacy Agencies, and Regional Water Quality Control Boards. We used various modeling approaches to then assess potential future impacts of MTBE on groundwater resources, focusing primarily on plume behavior in aquifer systems consisting of alluvial materials (i.e., sand, gravel, silt and clay). This report also includes specific information on MTBE impacts on groundwater in the Tahoe Basin.

A recent investigation into the impacts of MTBE on California groundwater by Happel et al. (1998) provided an important foundation for this study. The analysis of groundwater impacts contained herein complements the work of Happel et al. (1998) by accumulating more recent statewide information with broader geographic coverage. Moreover, we use plume length statistics compiled by Happel et al. (1998) as a basis for calibrating models that simulate future MTBE plume growth.

The use of MTBE in gasoline has increased steadily since it was first approved for use in gasoline by the United States Environmental Protection Agency (USEPA) in 1979. MTBE is produced from isobutene, a waste product of the petroleum refining process. In 1994, MTBE was ranked as the eighteenth most produced chemical in the United States. By 1995 it was ranked twelfth, and by 1997 it was ranked second (OEHHA, 1998). MTBE was used in California's lead phase out program in 1979 at volumes up to 2 percent as a lead substitute and octane booster.

The US EPA approved use of MTBE in 1981 up to 10 percent and in 1988 approved its use up to 15 percent by volume (CAEPA, 1998). As early as 1988, MTBE use in southern California had begun to increase. In 1988, a refiner introduced an environmentally clean fuel in California that included 6 to 8 percent MTBE by volume. This refiner reportedly supplied 30 percent of the fuel in California of which approximately 20 percent of this refiner's sales was the environmentally clean fuel. This fuel was sold principally in southern California (D. Simeroth, personal communication, 1998).

The complete phase out of lead in fuel occurred in 1992, at which time the Winter Time Oxygenate Program began in California. There was an increased use of MTBE in the southern part of the state, with longer wintertime intervals and an earlier commencement of the year-round oxygenate program starting in 1995 rather than 1996. After March 1, 1996, all gasoline sold in California was Phase 2 reformulated gas containing 11 percent by volume MTBE. Approximately, 92 billion gallons of MTBE was produced in 1997 (Zogorski et al., 1998). California is reportedly the third largest worldwide consumer of MTBE, second only to the rest of the United States and the former Soviet Union (OEHHA, 1998).



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

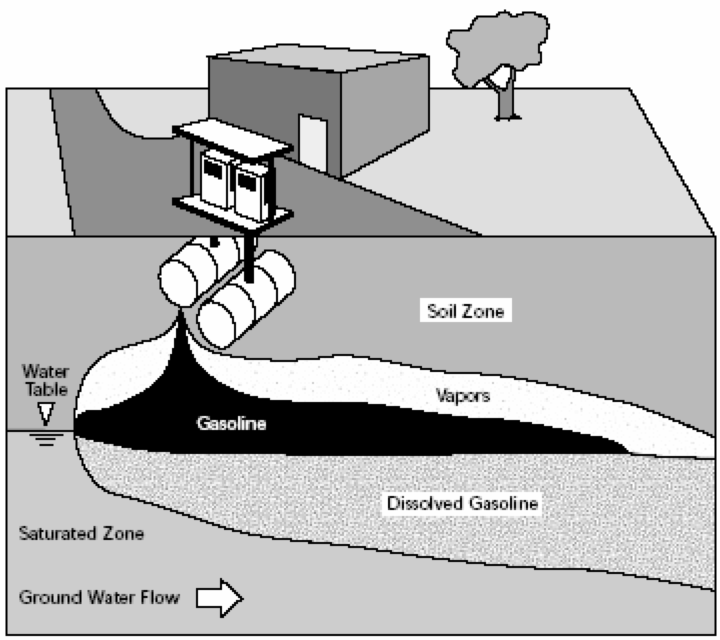
University of California at Davis; "Impacts of MTBE on California Groundwater"

Sources of MTBE in Groundwater

MTBE sources of groundwater contamination include leaking underground fuel tanks (LUFT's), above ground storage tanks, farm tanks, leaking petroleum fuel pipelines, underground storage tanks containing fuels other than gasoline, surface spills due to automobile or tanker truck accidents, surface spills due to abandoned or parked vehicles, MTBE contaminated surface water, and precipitation. The LUFT sites are numerous, widely dispersed, proportional to the state's population, and involve enormous volumes of fuel products. As of June 30, 1998 there were 32,779 known sites where chemical compounds, including gasoline and non-gasoline products, were discharged to the environment from underground storage tanks. Ninety percent of these discharges involve petroleum products.

University of California at Davis; "Impacts of MTBE on California Groundwater"

Ground Water Contamination as a Result of Leaking Underground Storage Tanks



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.

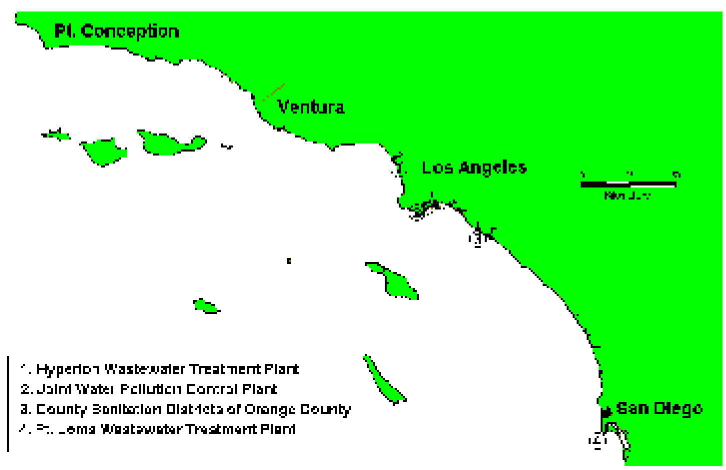
EPA is developing a regulation on ground water that specifies the appropriate use of disinfection and addresses other components of ground water systems to ensure public health protection. Various studies seem to indicate that the number of ground water sources with evidence of fecal contamination is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

Transportation Loss

Transportation Loss was rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC

Transportation disruption and loss in Santa Monica and Malibu 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.

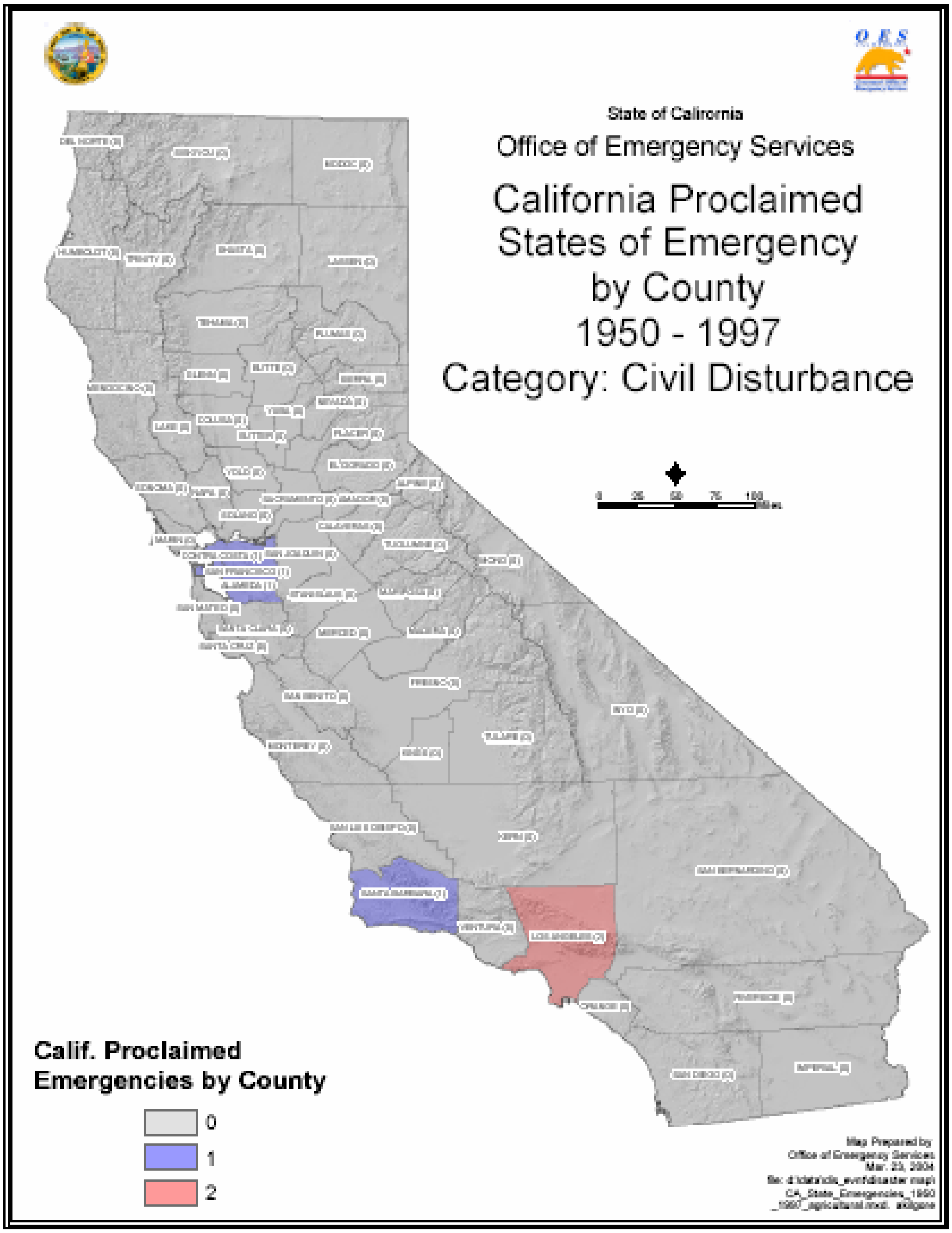
Type of Vehicle Registrations	2000	1999	1998
Autos	5,134,168	4,935,605	4,825,512
Trucks	1,021,397	991,315	970,993
Trailers	283,402	283,402	262,506
Motorcycles	81,167	75,569	74,210
Total	6,520,134	6,290,976	6,133,221

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

Civil Unrest/Disorder

Civil Unrest was rated a MODERATE PRIORITY HAZARD in SMMUSD & SMC.

Civil disturbances can occur almost anywhere. However, the most significant ones in California have historically taken place in large urban centers. Deaths and injuries occurred to individuals who were in or around the disturbances while they were happening. Damage was caused by thrown objects, fires, and looting. Educational facilities are thought to be especially vulnerable because of the nature of openness and the student populations it serves.



History of Civil Unrest in Los Angeles County

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.
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

Comparatively, Santa Monica-Malibu Unified School District and Santa Monica College are relatively free of gang activity; however, there have been instances where gangs have influenced activities around school grounds and college campuses. Asian gang activity has become more pronounced over recent times in SMMUSD facilities. Santa Monica is known as the home of certain smaller Asian Gang-affiliated groups.

All Blood 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 Crip 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.

I surveyed all the gang graffiti and identified the places where aggressive graffiti was the most prevalent. I designated an address for each occurrence and matched it to a street file of South Los Angeles. I categorized each location as either **boundary**, **near boundary**, or **interior**.

This analysis explored the extent to which aggressive graffiti messages are found on the boundaries of gang territories more so than the interior. Special attention was given to the hypothesis put forth by geographers David Ley and Roman Cybriwsky stating that the most aggressive graffiti is found at the boundaries of gang territories (1974). This map reveals that the same pattern was found among Los Angeles gang graffiti written by Black gangs.

Asian Gangs in Los Angeles County

There are approximately 20,000 Asian gang members in Los Angeles County and represent a diverse array of backgrounds and affiliations. There are Asian gangs that down with the Surenos, some affiliated with Bloods and Crips and several independent entities such as the Chinese Wah Chings, Philipino, Cambodian and Vietnamese gangs. Below is a preliminary list of cities and places within Los Angeles County where Asian gangs are active:

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

Gang Legislation

Since the 1980s many states have adopted legislation and laws specifically drafted to combat street gangs and to make it easier to prosecute their offenses. California has led the nation in laws written to prosecute gangs, but many US states have their own laws. This section will focus on California, City of Los Angeles, and the County of Los Angeles' laws related to gang activity.

CALIFORNIA

California 186.20, also known as the "California Street Terrorism Enforcement and Prevention Act" or STEP Act.
California 186.22(a)
California 186.22(b)(c)(d) , gang participation
California 186.22(e)(f), gang definitions
California 186.22(b)(4) , gang enhancement
California 189, Drive-by Shootings; Murder; Carjacking
California 190.2(a)(22), Shooting from a Motor Vehicle
California 213, Robbery
California 246, discharging a weapon from a car.
California Code 666.7, sentence enhancement
California 12022.55, Shooting from a Motor Vehicle
California 12034, Driver's responsibilities

Graffiti Prohibition

County of Los Angeles

Title 13 PUBLIC PEACE, MORALS AND WELFARE Chapter 13.12 GRAFFITI PREVENTION, PROHIBITION AND REMOVAL 13.12.020. Definitions.

13.12.030. Unlawful to apply graffiti -- Prohibition of defacement
13.12.040. Possession of graffiti implements by minors prohibited
13.12.050. Possession of graffiti implements prohibited in designated public places
13.12.060. Limiting access to graffiti implements -- Furnishing to minors prohibited
13.12.060. Limiting access to graffiti implements -- Furnishing to minors prohibited
13.12.070. Display for sale -- Requirements
13.12.090. Graffiti declared public nuisance
13.12.100. Removal of graffiti by perpetrator
13.12.110. Removal provisions
13.12.120. Rewards for information
13.12.130. Penalties and civil liability of parents
13.12.140. Violations--Civil remedies available
13.12.150. Severability

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LOW RISK Human-caused Hazards

Explosion

Explosion was rated a LOW PRIORITY HAZARD in SMMUSD & SMC.

An explosion is a rapid release of stored energy characterized by a bright flash and an audible blast. Part of the energy is released as thermal radiation (flash); and part is coupled into the air as air blast and into the soil (ground) as ground shock, both as radially expanding shock waves.

To be explosive, the material:

1. Must contain a substance or mixture of substances that remains unchanged under ordinary conditions, but undergoes a fast chemical change upon stimulation.

2. This reaction must yield gases whose volume—under normal pressure, but at the high temperature resulting from an explosion—is much greater than that of the original substance.

3. The change must be exothermic in order to heat the products of the reaction and thus to increase their pressure.

Common types of explosions include construction blasting to break up rock or to demolish buildings and their foundations, and accidental explosions resulting from natural gas leaks or other chemical/explosive materials.

The rapid expansion of hot gases resulting from the detonation of an explosive charge gives rise to a compression wave called a **shock wave,** which propagates through the air. The front of the shock wave can be considered infinitely steep, for all practical purposes. That is, the time required for compression of the undisturbed air just ahead of the wave to full pressure just behind the wave is essentially zero.

If the explosive source is spherical, the resulting shock wave will be spherical. Since its surface is continually increasing, the energy per unit area continually decreases. Consequently, as the shock wave travels outward from the charge, the pressure in the front of the wave, called the **peak pressure**, steadily decreases. At great distances from the charge, the peak pressure is infinitesimal, and the wave can be treated as a sound wave.

Behind the shock wave front, the pressure in the wave decreases from its initial peak value. At some distance from the charge, the pressure behind the shock front falls to a value below that of the atmosphere and then rises again to a steady value equal to that of the atmosphere. The part of the shock wave in which the pressure is greater than that of the atmosphere is called the **positive phase**, and, immediately following it, the part in which the pressure is less than that of the atmosphere is called the **negative or suction phase**.

Conventional structures, in particular those above grade, are susceptible to damage from explosions, because the magnitudes of design loads are significantly lower than those produced by most explosions. The peak pressure in the blast pulse produced by 10 lb of TNT at a range of about 50' is approximately 2.4 psi (which is 348 psf!) with a duration of the positive phase of 7.7 ms. Conventional structures are not normally designed to resist blast loads.

Recent terrorist attacks demonstrate the types of damage that can be produced. The 1993 terrorist attack on the World Trade Center in New York City removed several thousand square feet of concrete floor slabs in the general area of the explosion and severely damaged several buildings' communication, transportation and utility systems. Due to the inherent redundancy of the steel frames, the structures did not collapse.

The 1995 attack on the Alfred P. Murrah Federal Building in Oklahoma City revealed the vulnerability of conventional structural designs when subjected to blast loads. When a source is located at street level, the blast shock wave acts up against the underside of the floor slabs at upper stories. Floor slabs are not designed for this magnitude and direction of load—for this direction of load, the reinforcement is in the wrong place.

Explosion Hazards

There are many potential explosion hazards in Los Angeles County. Catastrophic explosions could be caused by:

- Exotic Chemicals and Substances
- Natural Gas and Propane
- Methane Gas
- Gasoline and other liquid fuels
- Manufactured and Military Explosives

The origin of a catastrophic explosion may be:

- Stationary pressure vessels and tanks
- Rail tank cars
- Truck tanks
- Pipelines
- Cargo ships carrying explosive materials

Explosions can be triggered by:

- Manual of Accidental Detonation of Explosives
- Fire/Open Flame
- Electrical Discharge
- Chemical Interaction
- Radiological Reaction
- Faulty Containment
- Equipment Malfunctions

Explosion Consequences

A catastrophic explosion could challenge responders to deal with:

- Mass casualties
- Fires
- Building and property destruction
- Infrastructure failure (telecommunications, transportation, etc.)
- Lifeline interruption
- Chemical or radiation contamination
- Debris removal

Special Event

Special Events were rated a LOW PRIORITY HAZARDS in SMUSD & SMC.

Large crowds, gathered for special events, represent disaster hazards in the following ways:

- Viable targets for a terrorists
- Concentration of people in a relatively small, enclosed area during earthquakes
- Site for mass casualties in the event of an aviation disaster
- Challenge to egress in the event of a large fire elevating the risk of mass casualties
- Depending on the event, could be prone to civil disobedience or riots

Santa Monica Bay

Santa Monica Bay spans about 20 miles (32 km) between two of the richest communities in California - Malibu and Palos Verdes. It's truly the "Cold Coast" of the Golden State, and its shores have some of the finest beaches anywhere, including Topanga, Santa Monica, and Venice on through Manhattan, Hermosa, Redondo, and Torrance. American surfing, and the youth culture it spawned, was born here. In the movies, these fabled beaches have stood in for everything from Guadalcanal and Tahiti to Shangri-la. The rows of mammoth palms along the Santa Monica promenade cliffs epitomize California. Access to the Pacific along the beaches - whether by ferry to Catalina Island, surfing, taking a gondola cruise through the canals of Long Beach, or just popping into the local waves from a newly discovered favorite strand - is bountiful. Take the plunge! Santa Monica's main attraction however, is Santa Monica Pier, which offers sundry entertainment options and a lively carnival atmosphere.

Malibu Adamson House & Malibu Lagoon Museum

Located on a bluff overlooking the Malibu Lagoon, this Spanish Colonial-style mansion was built by Rhoda Rindge Adamson and her husband, Merritt, in 1928. The complex showcases hand-painted ceramic tiles manufactured by Malibu Potteries, owned by the Rindge family. The Ridges also built the Malibu Colony, a celebrity enclave now home to Tom Hanks and Barbra Streisand. The Malibu Lagoon Museum next to the Adamson House chronicles Malibu's history, from its Shumash Indian origins to its position as movie star Shangri-la.

23200 Pacific Coast Hwy, Malibu

Santa Monica Pier

For a variety of entertainment, visit Santa Monica Pier. Where else can you hop on to a historic carousel, visit an aquarium, or ride a roller coaster? California's oldest amusement pier (built in 1908) also marks the western terminus of Route 66. Its oldest attraction is the 1916 Hippodrome, a merry-go-round that has made many movie appearances. Its newest 5 Pacific Park, a compact amusement park, anchored by a solar-powered Ferris wheel. Tucked beneath the pier, the Santa Monica Pier Aquarium is a small, family-oriented facility where you can observe and pet local marine life. At the end of Colorado Ave

Bergamot Station Arts Center

This former historic trolley station has been imaginatively recycled into an industrial-flavored complex of nearly three dozen galleries, shops, artists' studios, and a cafe. A highlight is the Santa Monica Art Museum, exhibiting cutting-edge artists, many of whom work in non-traditional media including video installations. It also organizes lectures, workshops, and other events designed to involve the community in the creative process.

2525 Michigan Ave, Santa Monica

Third Street Promenade

Downtown Santa Monica's main artery, this three-block mall is one of the most pleasant walking areas in LA. The product of a hugely successful revitalization effort in the late 1980s, it is flanked by upscale shops, movie theaters, and eclectic restaurants, bars, and cafes. Street musicians from around the globe shower strollers with flamenco, jazz, and hip hop. On Wednesday and Saturday mornings, the farmers market attracts large crowds.

3rd St between Broadway & Wilshire Blvd, Santa Monica

Venice Boardwalk

It is perhaps fitting that Venice Beach, masterminded by an eccentric visionary named Abbot Kinney, is LA's epicenter of counterculture. The circus-like scene reigning along the seaside boardwalk (officially known as "Ocean Front Walk") must be seen to be believed. Avoid after dark.

Ocean Front Walk between Venice Blvd & Rose Ave

Venice Canals

Abbot Kinney's Venice of America was once laced with 16 miles (26 km) of canals. The area anguished until the 1960s when beatniks such as Stuart Perkoff discovered its unique charm, dragging flower children - most famously Jim Morrison - in their wake. In 1994, the city restored 3 miles (5 km) of canals, which have since become a beautiful, upscale neighborhood. A narrow walkway that is known as the Venice Canal Walk threads through here.

Between Washington & Venice Blvds

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 Santa Monica-Malibu Unified School District (SMMUSD) and Santa Monica College (SMC) wants to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing District-wide visions. Objectives are statements that detail how each goal will be achieved, and typically define strategies or implementation steps to attain identified goals. Other important inputs to the development of District-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.

The City of Santa Monica and Malibu have completed their Hazard Mitigation Plans. The school districts will evaluate the cities' mitigation strategies and how to implement or network to ensure the maximum implementation for mitigation.

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. SMMUSD and SMC 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 each jurisdiction's legal, administrative, fiscal and technical capacities to support hazard mitigation planning. After completion of the capabilities assessment, SMMUSD and SMC evaluated and prioritized their proposed mitigations. Social, technical, administrative, political, legal, economic, and environmental opportunities as well as constraints of implementing a particular mitigation action were considered. This step resulted in a list of acceptable and realistic actions that address the hazards identified.

A full suite of goals, objectives and action items for the District is presented in this Plan. The Planning Committee 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.

SMMSD and SMC will continue to develop mitigation strategies and goals to future mitigate risks as time and funding allows.

Benefit-cost Review

Benefit-cost review (BCR) is an abbreviated quantitative method of comparing the projected benefits to projected costs of a project or policy. It is used as a measure of cost effectiveness. A modified process called "STAPLEE" was used to methodically review the benefit as opposed to the cost of each strategy and action listed where that information was attainable. The STAPLEE process considers the following:

SOCIAL	Community Acceptance	Effect on Segment of Population			
TECHNICAL	Technical Feasibility	Long-term Solution	Secondary Impacts		
ADMINISTRATIVE	Staffing	Funding Allocated	Maintenance/Operations		
POLITICAL	Political Support	Local Champion	Public Support		
LEGAL	State Authority	Existing Local Authority	Potential Legal Challenge		
ECONOMIC	Benefit of Action	Cost of Action	Contributes to Economic Goals	Outside Funding Required	
ENVIRONMENTAL	Effects on Land/Water	Effect on Endangered Species	Effect on HAZMAT / Waste Sites	Consistent with Community Environmental Goals	Consistent with Federal Laws

The result of this review is documented in each strategy matrix.

The jurisdictions are aware a cost-benefit analysis needs to be performed for each mitigation strategy before grant submittal.

Strategies and Recommendations

Synopsis of Strategies – Santa Monica-Malibu USD

The matrix below shows the HIGH and MODERATE RISKS as identified by the Hazard Mitigation Planning Committee. Each of the future strategies specified address one or more of the risks. 'P' shows the primary hazard and "X" shows subsequent hazard(s).

Strategy #	Earthquake	Wild Fire	WMD/Terr	Utility Loss	Data	Winds	Aviation	Trans Inc	Economic	Biological	Severe Wx	Water	Floods	Trans Loss	Civil Unrest	Drought
AH1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EQ1	P															
EQ2	P															
EQ3	P															
EQ4	P															
EQ5	P															

Strategy #	Earthquake	Wild Fire	WMD/Terr	Utility Loss	Data	Winds	Aviation	Trans Inc	Economic	Biological	Severe Wx	Water	Floods	Trans Loss	Civil Unrest	Drought
EQ6	P															
EQ7	P											X				
EQ8	P			X												
WF1		P														
WF2		P														
WT1			P													
WT2			P							X						
DT1					P											
DT2					P											
DT3					P											
ED1									P							
BH1										P						
BH2										P						
SW1											P					
SW2	X										P					
SW3											P					
FL1													P			
FL2										X			P			
FL3										X			P			
FL4										X			P			
CU1			X												P	
CU2															P	

Santa Monica-Malibu USD Mitigation Strategies

All Hazards (AH)

Strategy AH-1

Program/Project	Sanitation Supplies
Cost	$15,000.
Timeline	1 year
Department	Maintenance & Operations
Financing	Grants
Goal Addressed	Reducing the risk of disease; Sanitation supplies, specifically, would reduce the risk of disease after the disaster.
Related Hazard	All Hazards
Priority	1

Strategy AH-2

Program/Project	Satellite Phone
Cost	$4,000.
Timeline	3 years
Department	Purchasing – Virginia Hyatt
Financing	Purchasing
Goal Addressed	Satellite phones would be another method to establish communication with outside agencies in the event that all other lines of communication failed.
Related Hazard	All Hazards
Priority	1

Strategy AH-3

Program/Project	Two-way radios
Cost	$20,000.
Timeline	1 year
Department	Purchasing – Virginia Hyatt
Financing	Purchasing
Goal Addressed	Two-way radios would provide a means of communication in the event that phones were inaccessible.
Related Hazard	All Hazards
Priority	1

Strategy AH-4

Program/Project	Develop Formula for Disaster Supplies per School Site
Cost	$2,000.
Timeline	6 months
Department	Pupil Services – Marolyn Freedman
Financing	Pupil Services
Goal Addressed	A disaster supply formula would ensure equality among school sites, as well as, ensure that each site has the recommended minimum supplies.
Related Hazard	All-Hazards
Priority	1

Strategy AH-5

Program/Project	First Aid / CPR Training
Cost	$45,000.
Timeline	5 years
Department	Pupil Services – Marolyn Freedman
Financing	Fire Department
Goal Addressed	Increase the level of specialized emergency skills among the workforce, in turn increasing the chances of survival. Education is essential to response and prevention.
Related Hazard	All-Hazard
Priority	1

Strategy AH-6

Program/Project	Nextel Phones
Cost	$75,000.
Timeline	5 years
Department	Purchasing – Virginia Hyatt
Financing	Grants
Goal Addressed	Communication – Nextel phones would be another method to establish communication with outside agencies in the event that other lines of communication failed. Would allow for quick access to other units, ensuring response and life saving efforts.
Related Hazard	All-Hazard
Priority	1

Strategy AH-7

Program/Project	Out-of-State 800 Phone line /MCI Alert System
Cost	$45,000.
Timeline	3 years
Department	Purchasing – Virginia Hyatt
Financing	Grants
Goal Addressed	Communication – Out-of-State telephone lines would allow for communication between Emergency Team members in the event that in-state lines were jammed or clogged.
Related Hazard	All-Hazards
Priority	1

Strategy AH-8

Program/Project	Body Bags -15
Cost	$6000
Timeline	1 year
Department	Pupil Services – Marolyn Freedman
Financing	Grants
Goal Addressed	Reduce Biological disease – Body bags would provide for the preservation of bodies and reduce the risk of spreading disease to people on site.
Related Hazard	All-Hazard
Priority	1

Strategy AH-9

Program/Project	Alternate EOC Location
Cost	$25,000.
Timeline	6 months or as funds become available
Department	Pupil Services – Marolyn Freedman
Financing	Grants
Goal Addressed	Ensure operations are ongoing during an emergency. If primary EOC location were destroyed, the school district would be able to response and recover.
Related Hazard	All-Hazard
Priority	1

Strategy AH-10

Program/Project	Update SEMS Manual
Cost	$1,500.00
Timeline	6 months
Department	Pupil Services
Financing	Pupil Services
Goal Addressed	Ensure updated procedures are current with risk analysis and methodology.
Related Hazard	All-Hazard
Priority	1

Strategy AH-11

Program/Project	Ongoing SEMS Training
Cost	$150,000.
Timeline	Ongoing
Department	Pupil Services – Marolyn Freedman
Financing	Grants
Goal Addressed	Education Staff – Ensure fast and efficient communication, prevention, response, recovery, and mitigation in a disaster.
Related Hazard	All-Hazards
Priority	1

Strategy AH-12

Program/Project	Childcare Supplies
Cost	$75,000.
Timeline	6 months
Department	Pupil Services –Marolyn Freedman
Financing	Grants
Goal Addressed	Sustain Life – Baby food and essential supplies for toddlers and infants for the childcare center and others, which may utilize the school facilities as an evacuation site.
Related Hazard	All-Hazards
Priority	1

Strategy AH-13

Program/Project	District Credit Cards
Cost	$1,000.
Timeline	6 months
Department	Purchasing –Virginia Hyatt
Financing	Purchasing
Goal Addressed	Ensure access to materials during an emergency. Establish a procedure for staff to purchase necessary equipment to facilitate response and recovery.
Related Hazard	All Hazards
Priority	1

Strategy AH-14

Program/Project	Emergency Credit Line
Cost	$1,000.
Timeline	6 months
Department	Purchasing - Virginia Hyatt
Financing	Purchasing
Goal Addressed	Ensure access to materials during an emergency. Establish a procedure for staff to purchase necessary equipment to facilitate response and recovery.
Related Hazard	All Hazards
Priority	1

Strategy AH-15

Program/Project	Phone Chargers for District Staff
Cost	$15,000.
Timeline	1 year
Department	Purchasing – Virginia Hyatt
Financing	Grants
Goal Addressed	Keep phones charged for communication.
Related Hazard	All Hazards
Priority	1

Strategy AH-16

Program/Project	Radio Chargers for District Staff
Cost	$15,000.
Timeline	Purchasing – Virginia Hyatt
Department	Purchasing
Financing	Grants
Goal Addressed	Keep radios charged for communication
Related Hazard	All Hazards
Priority	1

Strategy AH-17

Program/Project	Post Disaster Recovery Plan
Cost	$85,000.
Timeline	2 years
Department	Fiscal Services – Michael Hill
Financing	Grants
Goal Addressed	Sustain business after disaster – Ensures preparedness for the school district to outline mitigation pre-disaster.
Related Hazard	All-Hazards
Priority	1

Strategy AH-18

Program/Project	Emergency Supplies (School Sites)
Cost	$200,000.
Timeline	Pupil Services – Marolyn Freedman
Department	Pupil Services
Financing	Grants
Goal Addressed	Emergency supplies would include; Radios, phones, chargers, back batteries, shovels, axes, pry bars, food bars, water packets, sanitation supplies, pens, pencils, notepads, hard hats, vests, tables, chairs, medical supplies, etc for school sites.
Related Hazard	All-Hazard
Priority	1

Strategy AH-19

Program/Project	Open Purchase Orders with Vendors
Cost	$1,500.
Timeline	6 months
Department	Purchasing – Virginia Hyatt
Financing	Purchasing
Goal Addressed	Establish methodology to receive response and recovery supplies
Related Hazard	All-Hazard
Priority	1

Strategy AH-20

Program/Project	Break-away Locks Access to Food Services
Cost	$1,000.
Timeline	1 year
Department	Food Services – Orlando
Financing	Food Services
Goal Addressed	Breakaway locks would allow for access to food stores in the event that keys are lost or inaccessible.
Related Hazard	All-Hazard
Priority	2

Strategy AH-21

Program/Project	Generators
Cost	$2,000,000.00
Timeline	5 years
Department	Maintenance & Operations
Financing	Grants
Goal Addressed	Large Scale generators would provide a means of powering operations for an extended period in the event that public utilities were down for an extended period. Ensures life support for the special needs students.
Related Hazard	All Hazards
Priority	2

Strategy AH-22

Program/Project	CERT Training (Community Emergency Response Training
Cost	$45,000.
Timeline	5 years
Department	Pupil Services
Financing	Pupil Services
Goal Addressed	Increase the level of specialized emergency skills among the workforce, increasing the efficiency in response and recovery, increasing the chances of survival.
Related Hazard	All-Hazards
Priority	2

Strategy AH-23

Program/Project	Alternative District Site – Ghost Center
Cost	$300,000.
Timeline	2 years
Department	Information Services – Will Carey
Financing	Grants
Goal Addressed	Ensure communication and data are available during an emergency- provide a means to keep District running if District Office is compromised for an period of time; (business, student, staff records)
Related Hazard	All-Hazard
Priority	2

Strategy AH-24

Program/Project	Camera Systems
Cost	$250,000.
Timeline	2 years
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Reduce loss to life; and property. Property and site assessment, locate students and staff within the buildings, reduce or prevent violence/terrorism for outside or inside entities.
Related Hazard	All-Hazard
Priority	2

Strategy AH-25

Program/Project	Insurance Policies
Cost	$500,000.
Timeline	1 year
Department	Fiscal Services – Michael Hill
Financing	Fiscal Services
Goal Addressed	Reduce financial losses – other policies in place to recover funds after disasters of any type. Reduce economical impact of a catastrophic event/disaster.
Related Hazard	All-Hazard- Economic Loss
Priority	2

Strategy AH-26

Program/Project	Automatic External Defibrillators
Cost	$400,000.
Timeline	2 years
Department	Pupil Services – Marolyn Freedman/Hane Jeffries
Financing	Grants
Goal Addressed	Life sustaining - Preventive equipment- for students, staff, and evacuees; reduce loss of life.
Related Hazard	All-Hazards
Priority	2

Strategy AH-27

Program/Project	Inverters on buses for power supplies
Cost	$50,000.
Timeline	1 year
Department	Transportation – Neal A.
Financing	Grants
Goal Addressed	Life support back up equipment for each bus. Sustain life support to reduce the chance of death.
Related Hazard	All-Hazards
Priority	2

Strategy AH-28

Program/Project	Portable Water Filtration System
Cost	$4,000.
Timeline	3 years
Department	Food Services – Orlando
Financing	Grants
Goal Addressed	Provide an additional method of hydration in the event that water supplies are diminished or corrupted.
Related Hazard	All-Hazards
Priority	2

Strategy AH-29

Program/Project	Counseling Service
Cost	$100,000.
Timeline	5 years
Department	Pupil Services – Marolyn Freedman
Financing	Grants
Goal Addressed	Establish counseling services will allow for the mental health of students, staff, and others who may have been victims of the disaster.
Related Hazard	All-Hazards
Priority	2

Strategy AH-30

Program/Project	Develop GIS Capabilities
Cost	TBD
Timeline	5 years
Department	Business Services/Data/Telecommunication
Financing	Grants
Goal Addressed	Develop a GIS system to provide the capability of tracking transportation, facilities, and assets to better determine hazard vulnerability
Related Hazard	All-Hazards
Priority	3

Strategy AH-31

Program/Project	Aerial Identification w/Latitude and Longitude (20 buildings)
Cost	$20,000.
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Easy identification system for outside agencies in response and recovery. Expedite rescue of trapped or injured victims. Identification for law enforcement responding to violence or terrorism.
Related Hazard	All-Hazards
Priority	3

Strategy AH-32

Program/Project	Portable Sinks for Food Services
Cost	$1975.00 x 16 = $31,600
Timeline	1 year
Department	Food Services – Orlando
Financing	Grants
Goal Addressed	Portable sinks would allow for the reuse of food cookware and provide a means of continued nutrition. Reduce the risk of biological contamination.
Related Hazard	All-Hazards
Priority	3

Strategy AH-33

Program/Project	Portable Cooking Equipment
Cost	$15,000.
Timeline	3 years
Department	Food Services – Orlando
Financing	Grants
Goal Addressed	Portable cooking equipment would allow for the preparation of food to victims of the disaster in a sterilized method, reducing the risk of biological disease and sustain life.
Related Hazard	All-Hazards
Priority	3

Strategy AH-34

Program/Project	Portable Serving Equipment
Cost	$85,000.
Timeline	3 years
Department	Food Services – Orlando
Financing	Grants
Goal Addressed	Provide serving equipment would allow for the distribution of food in a sterilized method, reducing the risk of biological disease and sustain life.
Related Hazard	All-Hazards
Priority	3

Earthquake (EQ)

Strategy EQ-1

Program/Project	Search & Rescue Supplies
Cost	$2,500.00
Timeline	6 months – 1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Supplies and Equipment dedicated to Search and Rescue. Shovels, axes, pry bars, etc. Necessary supplies to move debris and can be used for sanitation purposes as well
Related Hazard	Earthquake
Priority	1

Strategy EQ-2

Program/Project	Water Packets & Food Bars
Cost	$100,000.00
Timeline	6 months
Department	Food Services - Orlando
Financing	Grants
Goal Addressed	Sustain life to staff, students, and civilians seeking shelter.
Related Hazard	Earthquake
Priority	1

Strategy EQ-3

Program/Project	Ongoing Tie-Down Program
Cost	$50,000.
Timeline	1 year
Department	Maintenance & Operations- Rick Demuth
Financing	Grants
Goal Addressed	Establish an ongoing tie-down program to prevent injuries to staff and students during an earthquake. The cost would cover equipment and staff time.
Related Hazard	Earthquake
Priority	1

Strategy EQ-4

Program/Project	Gas/Water /Electric Shutoff Procedure
Cost	$1,500.
Timeline	6 months
Department	Maintenance & Operations – Rick Demuth
Financing	Maintenance & Operations
Goal Addressed	Reduce or eliminate the possibility of explosions after a disaster. Reduces loss of life and property damage.
Related Hazard	Earthquake
Priority	1

Strategy EQ-5

Program/Project	Portable Generator
Cost	$75,000.
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Need site or use specific separate from the other generators in All-Hazards Ensure power supplies during emergency recovery.
Related Hazard	Earthquake
Priority	1

Strategy EQ-6

Program/Project	Bicycles
Cost	$1,000.
Timeline	6 months
Department	Transportation
Financing	Transportation
Goal Addressed	Bicycles would allow for the communication of information between ICP's of different locations when vehicles cannot operate. Allows for flexible transportation.
Related Hazard	Earthquake
Priority	3

Strategy EQ-7

Program/Project	Chemical Toilets
Cost	$30,000.
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Sanitation equipment to reduce the risk of biological disease in an emergency.
Related Hazard	Earthquake Water-Wastewater Disruption
Priority	3

Strategy EQ-8

Program/Project	Manual Typewriters to Issue Emergency PO's
Cost	$700.
Timeline	6 months
Department	Purchasing – Virginia Hyatt
Financing	Grant or as funds become available
Goal Addressed	Ensure a methodology to complete documents for obtaining emergency supplies during a disaster with utility loss.
Related Hazard	Earthquake, Utility Loss
Priority	3

Wildland Urban Interface Fire (WF)

Strategy WF-1

Program/Project	Contract Los Angeles County Fire Department for Fuel Modification
Cost	$170,000.
Timeline	2 years
Department	Fiscal Services – Michael Hill
Financing	Fiscal Services
Goal Addressed	Establish and maintain fire breaks between schools and undeveloped land with vegetation. Reduce the potential for fires on the District property and loss of life.
Related Hazard	Wildland/Urban Interface Fire
Priority	1

Strategy WF-2

Program/Project	Fire Retardant Plants
Cost	$100,000.
Timeline	3 years
Department	Maintenance & Operations
Financing	Grants
Goal Addressed	Minimize fire fuel on District property. Reduce property loss
Related Hazard	Wildland/Urban Interface Fire
Priority	1

WMD-Terrorism (WT)

Strategy WT-1

Program/Project	First Responder Training for HAZMAT
Cost	$150,000.
Timeline	Ongoing
Department	Pupil Services – Marolyn Freedman
Financing	Grants
Goal Addressed	Training for staff; How to respond to a chemical or hazardous material spill or exposure
Related Hazard	WMD/Terrorism
Priority	1

Strategy WT-2

Program/Project	Remote Retro fit damper closers for HVAC System
Cost	$500,000.
Timeline	2 years
Department	Maintenance & Operations
Financing	Grants
Goal Addressed	Prevent WMD air contaminants/and or exposure or biological agents from entering the airway system in schools and district facilities.
Related Hazard	WMD/Terrorism, Biological/Health Disease
Priority	2

Data-Telecommunications (DT)

Strategy DT-1

Program/Project	Back up System for Information
Cost	$150,000.
Timeline	2 years
Department	Information Services – Will Carey
Financing	Grant
Goal Addressed	To keep system up and running in an emergency; to ensure communication within the District and outside response agencies.
Related Hazard	Data/Telecommunication Loss
Priority	1

Strategy DT-2

Program/Project	Upgrade Information Technology Network
Cost	$150,000.
Timeline	2 years
Department	Information Services – Will Carey
Financing	Grants
Goal Addressed	Ensure communication within the District and outside response agencies. Prevent loss of data; reduce downtime and data loss
Related Hazard	Data Telecommunication Loss
Priority	2

Strategy DT-3

Program/Project	Off-Site Storage Back up System
Cost	$150,000.
Timeline	2 years
Department	Information Services – Will Carey
Financing	Grants
Goal Addressed	Off site storage of data to ensure information in case of primary system being destroyed in a disaster. Ensure communication and data capabilities.
Related Hazard	Data/Telecommunication Loss
Priority	2

Economic Disruption (ED)

Strategy ED-1

Program/Project	Rental Insurance Contracts
Cost	$3,000.
Timeline	6 months
Department	Fiscal Services – Michael Hill
Financing	Fiscal Services
Goal Addressed	Reduce financial loss; Reduce loss to our rental income property when our lessee is the victim of a disaster. Language in contracts for rental insurance for loss or damage to district property
Related Hazard	Economic Disruption
Priority	2

Biological/Health Disease (BH)

Strategy BH-1

Program/Project	Standing Water Elimination
Cost	$10,000.
Timeline	6 months
Department	Maintenance & Operations – Rick Demuth
Financing	Maintenance & Operations
Goal Addressed	Search and drain standing pools of water to reduce risk of Biological disease; (West Nile Disease)
Related Hazard	Biological/Health Disease
Priority	2

Strategy BH-2

Program/Project	Industrial Hygiene Equipment
Cost	$15,000.
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants, ASCIP, or other
Goal Addressed	Detect elements in the air more quickly – prevent injury or illnesses to staff and students; detect biological agents
Related Hazard	Biological/Health Diseases
Priority	2

Severe Weather (SW)

Strategy SW-1

Program/Project	Ongoing Roof Maintenance Project
Cost	$50,000.
Timeline	Ongoing
Department	Maintenance & Operations – Rick Demuth
Financing	Maintenance & Operations
Goal Addressed	Reduce biological agents and reduce property loss due to rains and severe weather. Keeps buildings in good repair, ensuring building integrity and safe surroundings.
Related Hazard	Severe Weather
Priority	1

Strategy SW-2

Program/Project	Window Retro-fitting
Cost	$5,000,000
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Reduce property damage and ensure building safety for students and staff.
Related Hazard	Severe Weather – Earthquake
Priority	2

Strategy SW-3

Program/Project	Plywood
Cost	$25,000.
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Materials for covering windows to eliminate or reduce the risk of property damage and loss or injury to students and staff.
Related Hazard	Severe Weather, Tsunami
Priority	2

Flood (FL)

Strategy FL-1

Program/Project	Storm Drain Upgrades
Cost	$800,000.
Timeline	2 years
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	To assist in the removal of rain water or floods; Reduce biological agents and property loss
Related Hazard	Flood
Priority	1

Strategy FL-2

Program/Project	Replace carpet with tile
Cost	$4,000,000.
Timeline	Ongoing
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Reduce property loss and potential for biological agents due to moisture
Related Hazard	Floods; Biological /Health
Priority	3

Strategy FL-3

Program/Project	Replace carpet with tile
Cost	$4,000,000.
Timeline	Ongoing
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Reduce property loss and potential for biological agents due to moisture
Related Hazard	Floods; Biological /Health
Priority	3

Strategy FL-4

Program/Project	Siphon Tubing and pump
Cost	$500.00
Timeline	1 year
Department	Maintenance & Operations – Rick Demuth
Financing	Grants or as funds become available
Goal Addressed	Ensure ability to get gas supplies during an emergency; provide gas for generators – 4 per site
Related Hazard	Floods; Biological /Health
Priority	3

Civil Unrest (CU)

Strategy CU-1

Program/Project	Establish Information Sharing with the City of Santa Monica and Malibu, Los Angeles County Fire Department, California Highway Patrol
Cost	Staff time; $1,500.00
Timeline	6 months
Department	Fiscal Services – Michael Hill
Financing	Fiscal Services
Goal Addressed	Contact agencies to share information concerning hazardous materials, explosive materials, and other potential threats to staff, students and property
Related Hazard	Civil Unrest/Disorder, Terrorism
Priority	1

Strategy CU-2

Program/Project	Electric Gates
Cost	$1,500,000.
Timeline	2 years
Department	Maintenance & Operations – Rick Demuth
Financing	Grants
Goal Addressed	Provide barriers to prevent intruders from access to school sites to ensure staff and students
Related Hazard	Civil Unrest/Disorder
Priority	2

Santa Monica College Mitigation Strategies

Synopsis of Strategies – Santa Monica College

The matrix below shows the HIGH and MODERATE RISKS as identified by the Hazard Mitigation Planning Committee. Each of the future strategies specified address one or more of the risks. 'P' shows the primary hazard and "X" shows subsequent hazard(s).

Strategy #	Earthquake	Wild Fire	WMD/Terr	Utility Loss	Data	Winds	Aviation	Trans Inc	Economic	Biological	Severe Wx	Water	Floods	Trans Loss	Civil Unrest	Drought
AH1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH4	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH5	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH6	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH7	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH8	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH9	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
AH22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
EQ1	P															
EQ2	P					X	X						X			
EQ3	P					X	X						X			
EQ4	P					X	X						X			
EQ5	P					X	X						X			
EQ6	P					X	X						X			
WT1	X		P			X	X						X			
WT2	X	X	P	X	X	X	X	X	X	X	X	X	X	X	X	X
WT3			P													
DT1					P											

All Hazards (AH)

Strategy AH-1

Program/Project	Sanitation Supplies
Cost	$2,000.
Timeline	1 year
Department	Operations Dept.
Financing	Grants
Goal Addressed	Supplies needed to eliminate or reduce the risk of biological disease. Sustain quality of life in the event of a catastrophic event
Related Hazard	All Hazards
Priority	2

Strategy AH-2

Program/Project	Alternate EOC Site
Cost	$25,000.00
Timeline	6 months
Department	Risk Management
Financing	Grant
Goal Addressed	Ensure command location during disaster – reduce liabilities.
Related Hazard	All Hazards
Priority	1

Strategy AH-3

Program/Project	Update SEMS Manual
Cost	$1,500.00
Timeline	6 months
Department	Risk Management
Financing	Risk Management
Goal Addressed	Ensure effective actions during emergency. Compliance with applicable law. Modernize training and risk procedures
Related Hazard	All Hazards
Priority	1

Strategy AH-4

Program/Project	Open Purchase Orders/Vendors
Cost	$100.
Timeline	6 months
Department	Purchasing Dept.
Financing	Purchasing
Goal Addressed	Ensure materials are available for emergency/disaster 1st Responders
Related Hazard	All Hazards
Priority	1

Strategy AH-5

Program/Project	Aerial Identification w/Latitude and Longitude markings
Cost	$10,000.
Timeline	1 year
Department	Facilities
Financing	Grants
Goal Addressed	Identification of 20 buildings for rescue efforts with outside agencies
Related Hazard	All-Hazards
Priority	2

Strategy AH-6

Program/Project	Plywood – Protect or board damaged windows
Cost	$25,000.
Timeline	1 year
Department	Facilities
Financing	Grants
Goal Addressed	Plywood to cover glass windows to eliminate risk of injury to students. Or cover damaged windows to reduce or eliminate damage to property.
Related Hazard	Earthquake, Severe Weather, Winds, Civil Unrest/Disorder, Terrorism
Priority	1

Strategy AH-7

Program/Project	Body Bags
Cost	$5,000.
Timeline	1 year
Department	Risk Management
Financing	Grants
Goal Addressed	Body bags would provide for the preservation of bodies and reduce the risk of spreading disease to people on site
Related Hazard	All-Hazards
Priority	2

Strategy AH-8

Program/Project	Satellite Phones How many?
Cost	$4,000. Total price or per phone?
Timeline	3 years
Department	Telecommunications
Financing	Grant
Goal Addressed	Satellite phones would be another method to establish communication with outside agencies in the event that all other lines of communication fail.
Related Hazard	All-Hazard
Priority	1

Strategy AH-9

Program/Project	Two Way Radios
Cost	$500,000.
Timeline	12-18 months
Department	Telecommunication
Financing	Telecommunication
Goal Addressed	Two-way radios would provide a means of communication in the event that phones were inaccessible or inoperable. Staff, telecommunication, and outside agencies would have the ability to assess damage, communication with ICP, and receive medical assistance for injured people.
Related Hazard	All-Hazard
Priority	1

Strategy AH-10

Program/Project	Generators
Cost	$2,000,000.
Timeline	5 years
Department	Facilities
Financing	Grants
Goal Addressed	Large-scale generators would provide a means of powering operations for an extended period in the event that public utilities were down. Provide power to ensure life saving equipment.
Related Hazard	All-Hazards
Priority	1

Strategy AH-11

Program/Project	Develop Formula for Disaster Supplies per Campus
Cost	$700.00
Timeline	6 months
Department	Risk Management
Financing	Risk Management
Goal Addressed	A disaster supply formula would ensure equality among school sites, as well as, ensure that each site has the recommended minimum supplies. Emergency supplies hasten response and reduces potential loss of life.
Related Hazard	All-Hazard
Priority	1

Strategy AH-12

Program/Project	CERT Training (Community Emergency Response Training)
Cost	$45,000.
Timeline	5 years
Department	Risk Management
Financing	Fire Department
Goal Addressed	Increase the level of specialized emergency skills among the workforce/staff, in turn increasing the chances of survival in a disaster.
Related Hazard	All-Hazard
Priority	1

Strategy AH-13

Program/Project	First Aid/CPR Training
Cost	$45,000.
Timeline	5 years
Department	Risk Management
Financing	Grants
Goal Addressed	Increase the level of specialized emergency skills among the workforce, staff, and students, to reduce loss of life and/or increase survival.
Related Hazard	All-Hazard
Priority	1

Strategy AH-14

Program/Project	Nextel Phones
Cost	$50,000.
Timeline	5 years
Department	Telecommunications
Financing	Grants
Goal Addressed	Nextel phones would be additional method to establish communication with outside agencies in the event that other lines of communication failed. Would allow for quicker access to other units.
Related Hazard	All-Hazards
Priority	1

Strategy AH-15

Program/Project	Out-of-State 800 Phone Line/MCI Alert System
Cost	$45,000.
Timeline	3 years
Department	Telecommunications
Financing	Grants
Goal Addressed	Out-of-State telephone lines would allow for communication between Emergency Team members in the event that in-state lines were jammed or clogged.
Related Hazard	All-Hazards
Priority	1

Strategy AH-16

Program/Project	Counseling Services
Cost	$100,000.
Timeline	5 years
Department	Student Services
Financing	Grants
Goal Addressed	Establish counseling services will allow for the mental health of students, employees and others who may have been a victim of the disaster. Reduces long-term psychological damage to people. (Survivability)
Related Hazard	All-Hazards
Priority	2

Strategy AH-17

Program/Project	EOC Equipment
Cost	$20,000
Timeline	6 months
Department	Risk Management
Financing	Grant or as funds become available
Goal Addressed	Provide equipment for EOC in the Math Complex Room 84. Purchase laptops, pens, pencils, easels, additional phone lines, cots, fax machine, additional storage, computer hardware etc. Basic equipment to efficiently operate an EOC
Related Hazard	All-Hazards
Priority	1

Strategy AH-18

Program/Project	District wide disaster simulations, 2X/year on Saturdays.
Cost	Personnel cost for staff approximately $300,000.
Timeline	1 year
Department	Disaster Services
Financing	Grant
Goal Addressed	Training staff to enhance emergency response; Which would reduce loss of life and damage to property.
Related Hazard	All-Hazards
Priority	1

Strategy AH-19

Program/Project	Backup and/or backup Information Storage
Cost	$1,000,000.
Timeline	1 year
Department	President's Office, Human Resources, Student Services, Risk Management
Financing	Grants or as funds become available
Goal Addressed	Expand and protect record keeping capabilities District-Wide and provide redundancy. Protects vital records for operation and business services, which ensure business resumption.
Related Hazard	All-Hazards
Priority	1

Strategy AH-20

Program/Project	Modernization and Unification of Campus Security and Video Surveillance Systems
Cost	$1,000,000 estimate
Timeline	6 months – 1 year
Department	Telecommunication/Campus Police
Financing	Grants or as funds become available
Goal Addressed	Current security and video surveillance systems are not fully integrated and require multiply methods to monitor. Many at risk campus locations are not covered. Also, would enable the Campus Police to assess damage, injuries, or contain violence, reduce potential death and injury to students and staff.
Related Hazard	All-Hazards
Priority	1

Strategy AH-21

Program/Project	Wireless network access between Main Campus and all Satellite Campuses
Cost	$100,000.
Timeline	6 months if funded
Department	Network Services
Financing	Grants or as funds become available
Goal Addressed	Provide voice/data wireless access from satellite campuses to main campus in the event of utility loss and local Telco outages.
Related Hazard	All-Hazards
Priority	1

Strategy AH-22

Program/Project	Back :Up System for Information Technology
Cost	$150,000.
Timeline	2 years
Department	Information Technology
Financing	Grants
Goal Addressed	Ensure Communication- prevent loss of data, to keep IT system running in an emergency or disaster. Maintain the ability to distribute critical information to 1st Responders and emergency services.
Related Hazard	All Hazard; Data/Telecommunication Losses
Priority	1

Earthquake (EQ)

Strategy EQ-1

Program/Project	Earthquake Tie Down Program
Cost	$50,000.
Timeline	1 year
Department	Facilities
Financing	Grants
Goal Addressed	Tie-down all equipment and potential moving objects. Reduce risk of injury or loss of life and property damage.
Related Hazard	Earthquake
Priority	1

Strategy EQ-2

Program/Project	Shovels, axes, picks, pry bars and other necessary on site equipment
Cost	$2,100.
Timeline	1 year
Department	Facilities
Financing	Grants or as funds become available
Goal Addressed	Search and Rescue, acquire necessary equipment which would be used to assist in search and rescue activities, as well as, possible sanitation activities. Goal is to expedite recovery and minimize potential loss of life
Related Hazard	Earthquake, Severe Weather, Winds, Tsunami, Aviation Disaster, Floods
Priority	1

Strategy EQ-3

Program/Project	Food Supplies: Food, Water
Cost	$100,000.
Timeline	6 months
Department	Risk Management
Financing	Grants
Goal Addressed	The potential for students, staff, and civilians to utilize the campus during a disaster is high. The necessity to provide adequate shelter, food, and water is essential. Sustain life to either victims or displaced citizens.
Related Hazard	Earthquake, Severe Weather, Winds, Tsunami, Aviation Disaster, Floods
Priority	1

Strategy EQ-4

Program/Project	Portable Water Filtration System
Cost	$4,000.
Timeline	3 years
Department	Risk Management
Financing	Grants
Goal Addressed	Provide an additional method of hydration in the event the water supplies are diminished or corrupted. Sustain life
Related Hazard	Earthquake, Severe Weather, Winds, Tsunami, Aviation Disaster, Floods
Priority	2

Strategy EQ-5

Program/Project	Bicycles
Cost	$1,000.
Timeline	6 months
Department	Transportation
Financing	Transportation
Goal Addressed	Bicycles would allow for the communication of information between IC's of different college sites during times when vehicles cannot operate. Alternative method of transportation.
Related Hazard	Earthquake, Severe Weather, Winds, Tsunami, Aviation Disaster, Floods
Priority	3

Strategy EQ-6

Program/Project	Window Retro Fitting
Cost	$500,000.
Timeline	1 year or as funds become available
Department	Facilities
Financing	Grants
Goal Addressed	Replace glass, which is not shatter proof. Reduce potential for human injury or death and reduce property damage.
Related Hazard	Earthquake, Severe Weather, Winds, Tsunami, Aviation Disaster, Floods
Priority	2

WMD-Terrorism (WT)

Strategy WT-1

Program/Project	Biological Attack Training
Cost	$5000.
Timeline	6 months
Department	Risk Management & Santa Monica Fire Department
Financing	Grants
Goal Addressed	Reduce injury/death to staff and students; Would train key staff on safety measures to take in the event of a biological attack. Training would provide information on types of biological weapons, delivery systems, and management procedures and equipment that should be in place/available to reduce the impact of an attack.
Related Hazard	Earthquake, Severe Weather, Winds, Tsunami, Aviation Disaster, Floods
Priority	1

Strategy WT-2

Program/Project	Chemical Storage – Hazardous Materials
Cost	$150,000.
Timeline	1 year
Department	Maintenance & Operations, Risk Management
Financing	Grants or as funds become available
Goal Addressed	Expand chemical storage for better segregation of raw materials. Barrier lips to keep chemicals from falling off shelves. Chemical berm needed for secondary spill control. Improved segregation needed for hazardous waste storage. Mitigate explosion or fire due to chemical spill.
Related Hazard	Terrorism or Secondary affects of all hazards.
Priority	1

Strategy WT-3

Program/Project	Wind Detectors
Cost	$35,000.
Timeline	1 year
Department	Risk Management
Financing	Grants
Goal Addressed	Wind detectors for biological attacks. Detectors would relay information to communication system in the event of biological attack. It would provide an early warning system for SMC so protective measures could be put into place to ensure health and safety.
Related Hazard	Terrorism
Priority	2

Data Telecommunications (DT)

Strategy DT-1

Program/Project	Upgrade Network
Cost	$150,000.
Timeline	2 years
Department	Telecommunications
Financing	Grants
Goal Addressed	Reduce downtime and data loss, ensure communication
Related Hazard	Data/Telecommunication Losses
Priority	1

Section 6 – Future Actions & Goals

Preliminary Specific Goals & Actions

Listed below are Santa Monica-Malibu Unified School District & Santa Monica College's specific hazard mitigation goals and related potential actions. For each goal, one or more action items have been identified that provide strategies to attain the goal. Where appropriate, the District has identified a range of specific actions to achieve the long-term objective and goal.

The goals and actions 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 and actions were developed to represent a vision of long-term hazard reduction or enhancement of capabilities.

Santa Monica-Malibu Unified School District & Santa Monica College will use their school policies and business practices approved by their governing board to incorporate future mitigation strategies into their existing planning mechanism. On September 29, 2004, several bills were enacted as part of the settlement agreement in the case of Williams v. State of California. Senate Bill 550 required OPSC to develop an interim tool to evaluate whether a school is kept in "good repair". Santa Monica-Malibu School District and Santa Monica College views the Senate Bill 550 as a planning mechanism, which will work in accordance with mitigation strategies.

Santa Monica-Malibu Unified School District & Santa Monica College has developed the following Long Term Goals for their Hazard Mitigation Plan Program.

Development of Specific Goals

Goal 1 - Promote Disaster-resistant Schools

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

Goal 3 - Build and maintain schools making a concerted commitment to become less vulnerable to hazards.

Goal 4 - Estimate potential dollar losses to vulnerable structures.

Goal 5 - Enhance hazard mitigation coordination and communication with federal, state, and local governments.

Goal 6 - Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and District/College-owned facilities, due to the following HIGH RISK hazards:

- Earthquake
- Wildland/Urban Interface Fire
- WMD/Terrorism
- Utility Loss or Disruption
- Data/Telecommunications Loss
- Destructive Winds
- Aviation Disasters

Prioritization and Implementation of Action Items

Once the specific list of SMMUSD & SMC goals listed above was developed, the proposed mitigation actions items were prioritized by the Planning Executive Committee. This step resulted in a list of acceptable and realistic specific actions that address the hazards identified in the SMMUSD & SMC Service Area.

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 eight prioritized mitigation action items, as well as an implementation strategy for each are:

Action Item 1: Continue development and maintenance of the All-Hazard DMA 2000 plan by coordinating all SMMUSD & SMC Departments as well as all other Stakeholders.

- Potential Funding Source: FEMA Grants / General Funds.
- Implementation Timeline: 1 Year

Action Item 2: Review and update plans that would include coordination with cities, special districts and the County.

- Potential Funding Source: SMMUSD & SMC General Fund/ State and Federal Grants

Action Item 3: Update the SMMUSD & SMC Safety Plan every three years.

- Implementation Timeline: 1 - 3 years
- Potential Funding Source: State Grants

Action Item 4: Publicize and encourage the adoption of appropriate hazard mitigation actions.

- Potential Funding Source: General Fund/Federal or State grants.
- Implementation Timeline: 1 - 3 years

Action Item 5: Implement all new facility specifications and inspection guidelines to reflect current earthquake standards.

- Implementation Timeline: 2 - 5 years

Action Item 6: Review and compare existing flood control standards, zoning and building requirements with existing and planned facilities.

- Coordinating Individual school sites and school departments
- Potential Funding Source: General Fund/Federal or State Grants
- Implementation Timeline: 1 - 3 years

Action Item 7: Develop a Business Continuity Plan for SMMUSD & SMC District Office,

- Potential Funding Source: General Fund/Federal or State Grants.
- Implementation Timeline: 1 - 3 years

Action Item 8: Encourage every school to prepare and maintain a 3-day preparedness kit for the classroom and personal kits for home and work.

- Coordinating Individual/Organization: Public Relations / IT Departments.
- Potential Funding Source: General Fund/Federal or State grants
- Implementation Timeline: 1 - 3 years

Long-term Goals, Objectives Actions

The Santa Monica-Malibu Unified School District & Santa Monica College (SMMUSD & SMC) developed the following broad list of objectives and actions to assist in the implementation of each of their identified long-term goals. The District 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.

Goal 1: Promote disaster-resistant future construction.

Objective 1: Facilitate the development or updating of disaster related plans, which relate to hazard mitigation.

Action 1: Update
Action 2: Attract and retain qualified, professional, and experienced staff.
Action 3: Identify high hazard areas and facilities.

Facilitate the implementation inspection standards and practices that protect existing assets and restrict placing new facilities in hazard areas.

Action 4: Review hazard mitigation strategies every 3 years.

Objective 2: Facilitate consistent implementation of plans, safe school guidelines, and inspection standards.

Objective 3: Limit facility placement in hazardous areas

Action 1: Placement should be in harmony with existing topography.
Action 2: Placement patterns should respect environmental characteristics.
Action 3: Placement should be limited in areas of known geologic hazards.
Action 4: Ensure that jurisdictions in high fire hazard areas provide adequate access for emergency vehicles and the evacuation of students and staff.

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

Action 1: Coordinate existing Geographic Information Systems (GIS) capabilities to identify hazards throughout the SMMUSD & SMC.

Action 2: Develop the data sets that are necessary to test hazard scenarios and Mitigation tools including HAZUS MH
Action 3: Utilize the Internet as a communication tool, as well as an educational tool.

Objective 5: Increase public understanding, support, and demand for hazard mitigation for placement of new facilities.

Action 1 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 SMMUSD & SMC website.
Action 3: Heighten public awareness of hazards by using the SMMUSD & SMC Public Relations Officer.
Action 4: Gain public acceptance for avoidance policies in high hazard areas.

Objective 2: Gain public interest by supporting already existing public programs.

Action 1: Identify hazard specific issues and needs.
Action 2: Help create demand for hazard resistant construction and site planning.

Objective 3: Promote partnerships between the SMMUSD & SMC, County Office of Education, Federal, state, county, cities, and local governments to identify, prioritize, and implement mitigation actions.

Action 1: Develop, maintain, and improve lasting partnerships.
Action 2: Support jurisdictional Safety Councils.

Objective 4: Monitor and publicize the effectiveness of mitigation actions Implemented district-wide.

Action 1: Use the SMMUSD & SMC website to publicize mitigation actions.
Action 2: Utilize existing risk data.
Action 3: Establish budgets and identify funding sources for mitigation outreach.
Action 4: Develop and distribute brochures, CDs and other publications promoting safe schools and mitigation actions.

Objective 5: Provide education on hazardous conditions.

Action 1: Support public and private sector symposiums.
Action 2: Coordinate production of brochures, informational packets and other handouts.

Goal 3: Enhance hazard mitigation coordination and communication with federal, state, and local governments.

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 SMMUSD & SMC All-hazard mitigation plan on a regular basis

Action 3: Encourage all school sites to implement All-Hazard Mitigation Plan Strategies
Action 4: Streamline policies to eliminate conflicts and duplication of effort where feasible

Objective 2: Improve SMMUSD & SMC's capability and efficiency at administering pre- and post-disaster mitigation.

Action 1: Maintain coordination, communication, and cooperation with the Local Operational Area in administering recovery programs.
Action 2: Continue to exchange resources and work with local and regional partners.

Objective 3. Coordinate with the County Operational Area to enhance recovery activities while restoring and maintaining school services.

Objective 4: Utilize the newly developed Santa Monica-Malibu Unified School District & Santa Monica College Business Continuity Plan to prioritize the restoration and maintenance of SMMUSD & SMC services.

Goal 4: Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to Severe Weather.

Objective 1: Develop a comprehensive approach to reducing the possibility of damage and losses due to severe weather conditions

Action 1: Encourage and require water conservation wherever feasible
Action 2: Explore the development of new water resources
Action 3: Encourage the Federal Government to complete the decontamination of all underground water resources currently identified as Superfund sites

Objective 2: Encourage district-wide participation in mitigation strategies

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 Inspection Standards to reflect current earthquake standards.
Action 2: Encourage and participate in community awareness meetings.
Action 3: Distribute printed publications to the schools concerning hazards.

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

Action 1: Identify hazard-prone structures through GIS modeling.
Action 2: Design critical facilities to ensure that they function after a major earthquake.
Action 3: Encourage and continue the study of ground motion, landslide, and liquefaction relative to existing and new facilities.

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

Action 1: Identify projects for pre-disaster mitigation funding.
Action 2: Design and implement an ongoing district-wide seismic risk assessment program.

Action 3: Collaborate with Federal, State, universities, and local agencies' mapping efforts.

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

Action 1: Assess utility infrastructure with regard to facilities and earthquake risk, including public and private utilities.
Action 2 Encourage district-wide preparation and maintenance of a 3-day preparedness kit for home and classroom 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 with existing and new facilities.
Action 2: Identify and update flood-prone areas by using GIS.

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 that affect high-risk assets.
Action 3: Ensure adequate evacuation time in case of major hazard event.

Objective 3: Minimize repetitive losses caused by flooding.

Action 1: Identify those facilities that have recurring losses.
Action 2: Develop project proposals to reduce flood damage and improve control of facilities in flood prone areas.
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: Encourage district-wide preparation and maintenance of a 3-day preparedness kit for home and classroom.
Action 2: Maintain, develop, and implement hazard awareness programs.

Goal 7: Reduce the possibility of damage and losses to existing assets, including people, critical facilities/infrastructure, and public facilities due to structural fire/wildfire.

Objective 1: Develop a comprehensive approach to reducing the possibility of damage and losses due to structural fire/wildfire.

Action 1: Meet the Fire Code.
Action 2: Utilize GIS and the Internet as information tools.

Objective 2: Protect existing assets with the highest relative vulnerability to the effects of structural fire/wildfire.

Action 1: Maintain Standardized Defensible Space Clearance distances.

Objective 3: Coordinate with and support existing efforts to mitigate structural fire/wildfire.

Objective 4: Address identified data limitations regarding the lack of information about the relative vulnerability of assets from structural fire/wildfire.

Action 1: Continue to identify and update facilities within Urban/wildland fire interface areas.
Action 2: Use GIS to map facilities in fire risk areas.
Action 3: Implement district-wide education programs to address fire dangers and corrective measures.

Capabilities Assessment for Santa Monica-Malibu USD

The Santa Monica-Malibu Unified School District identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment portion of the Operational Area mitigation plan identifies administrative, technical, legal, and fiscal capabilities. This includes a summary of departments and their responsibilities associated to hazard mitigation planning as well as codes, ordinances, and plans already in place associated to hazard mitigation planning. The second part of the Assessment provides fiscal capabilities that may be applicable to providing financial resources to implement identified mitigation action items.

Existing Institutions, Plans, Policies and Ordinances

The following is (1) a summary of existing positions, their responsibilities related to hazard mitigation planning and implementation; and (2) a list of existing planning documents and regulations related to mitigation efforts within the 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. 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 (SMMUSD)

Position	Y/N	Department/Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	N	Business Services or Contract Services
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y/N	Facilities Management or Consultants as needed
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	Y/N	Facilities Management or Consultants as needed
Floodplain manager	N	Contract Services
Surveyors	Y/N	Facilities Management or Consultants as needed
Staff with education or expertise to assess the community's vulnerability to hazards	Y	DMA 2000 Hazard Mitigation Planning Committee
Personnel skilled in GIS and/or HAZUS	N	City of Santa Monica/City of Malibu
Scientists familiar with the hazards of the community	N	Outside Expertise
Emergency manager	Y	Pupil Services
Grant writers	Y	In Services/Business Services

Regulatory Tools (SMMUSD)

The legal and regulatory capabilities of each jurisdiction are shown in the table below, which presents the existing policies and regulations that affect the physical or built environment of SMMUSD.

Regulatory Tools (ordinances, codes, plans)	Y/N	Comments
Building code	Y	Division of State Architect
Zoning ordinance	N	Refer to City of Santa Monica/Malibu
Subdivision ordinance or regulations	N	N/A
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	N	N/A
Growth management ordinances (also called “smart growth” or anti-sprawl programs)	N	N/A
Site plan review requirements	N	
General or comprehensive plan	N	.
A capital improvements plan	Y	Developing Master Plan at this time
An economic development plan	Y	In Process
An emergency response plan	Y	Risk Management
A post-disaster recovery plan	N	
A post-disaster recovery ordinance	N	SEMS Compliant
Real estate disclosure requirements	N	Not Applicable/State Compliant
Habitat Management Plan	N	Not Applicable/State Compliant
Master Drainage, Sewer, Water, & Reclaimed Water	N	Not Applicable
Redevelopment Master Plan	N	

Fiscal Resources (SMMUSD)

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	Grants and Bonds
Authority to levy taxes for specific purposes	Y	General Election
Fees for water, sewer, gas, or electric service	N	N/A
Impact fees for homebuyers or developers for new developments/homes	Y	
Incur debt through general obligation bonds	Y	
Incur debt through special tax and revenue bonds	Y	
Incur debt through private activity bonds	N	
Withhold spending in hazard-prone areas	N	

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

Capabilities Assessment for Santa Monica College

The Santa Monica College identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment portion of the Operational Area mitigation plan identifies administrative, technical, legal, and fiscal capabilities. This includes a summary of departments and their responsibilities associated to hazard mitigation planning as well as codes, ordinances, and plans already in place associated to hazard mitigation planning. The second part of the Assessment provides fiscal capabilities that may be applicable to providing financial resources to implement identified mitigation action items.

Existing Institutions, Plans, Policies and Ordinances

The following is (1) a summary of existing positions their responsibilities related to hazard mitigation planning and implementation; and (2) a list of existing planning documents and regulations related to mitigation efforts within the College. The administrative and technical capabilities of each jurisdiction, as shown in the table below, provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the Plan. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural or human-caused hazards, floodplain managers, surveyors, personnel with GIS skills and scientists familiar with hazards in the community.

Administrative & Technical Capacity (SMC)

Position	Y/N	Department/Agency
Planner(s) or engineer(s) with knowledge of land development and land management practices	N	Consultants as needed and Gary McGavin
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	N	Consultants as needed
Planners or Engineer(s) with an understanding of natural and/or human-caused hazards	N	Gary McGavin
Floodplain manager	N	Not applicable
Surveyors	N	Consultants as needed
Staff with education or expertise to assess the community's vulnerability to hazards	Y	SMC Hazard Mitigation Planning Committee
Personnel skilled in GIS and/or HAZUS	N	City of Santa Monica
Scientists familiar with the hazards of the community	N	
Emergency manager	Y	Randal Lawson
Grant writers	Y	

Regulatory Tools (SMC)

The legal and regulatory capabilities of each jurisdiction are shown in the table below, which presents the existing ordinances and codes that affect the physical or built environment of College

Regulatory Tools (ordinances, codes, plans)	Y/N	Comments
Building code	Y	Division of State Architect
Zoning ordinance	N	Refer to City of Santa Monica
Subdivision ordinance or regulations	N	
Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	N	
Growth management ordinances (also called "smart growth" or anti-sprawl programs)	N	
Site plan review requirements	Y	Facilities Dept.
General or comprehensive plan	Y	Facilities Dept.
A capital improvements plan	Y	Facilities Dept.
An economic development plan	N	
An emergency response plan	Y	Risk Management
A post-disaster recovery plan	Y	Risk Management
A post-disaster recovery ordinance	N	SEMS Compliant
Real estate disclosure requirements	N	Not Applicable
Habitat Management Plan	N	Not Applicable
Master Drainage, Sewer, Water, & Reclaimed Water	N	Not Applicable
Redevelopment Master Plan	N	Modernization Plan

Fiscal Resources (SMC)

The table below shows specific financial and budgetary tools available to the College.

Financial Resources	Y/N	Comments
Community Development Block Grants	N	
Capital improvements project funding	Y	State and Local
Authority to levy taxes for specific purposes	Y	Bonds/Measures
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	Y	Bonds/Measures
Incur debt through special tax and revenue bonds	Y	Bonds/Measures
Incur debt through private activity bonds	N	
Withhold spending in hazard-prone areas	N	

Plan Development Resource List

SMMUSD Resource List

#	Title	Source	Date
1	Injury/Illness Prevention Program	Advanced Risk Control Technologies Corporation	1991
2	SEMS Manual	Dept. of Student Services SMMUSD	1/1996
3	Press Release-HMP Preparedness Questionnaire	SMMUSD	3/1/05
4	Asset Document-Picture of Schools w/list of assets not included in the report	American Appraisal Associates	No date
5	Central Office Emergency Response Responsibilities	Dept. of Student Services SMMUSD	2004/2005
6	Board action “Approval of Hazard Mitigation Vulnerability Analysis and Program Plan	SMMUSD	2/03/05
7	Santa Monica Boundary Map/School Sites	SMMUSD	11/04
8	Malibu Boundary Map/School Sites	SMMUSD	12/04
9	School District Logo	SMMUSD	
10	Disaster Preparedness Plan 2004-05 Franklin Elementary School	SMMUSD	7/08/04
11	Proposition X/State Facility Program Budget R-16 1999-2004	SMMUSD	3/27/2004
12	Proposition ES Modernization 1991-1998	SMMUSD	
13	Presentation to OCEMO-February 3.2005 NS/EP Priority Telecommunications Services	Ralph Parker Area Coordinator Science Applications International Corp Homeland Security	Feb. 3,2005
14	CD Facilities Pictures	SMMUSD	
15	FEMA DR Claims	SMMUSD	

SMC Resource List

#	Title	Source	Date
1	SEMS Organization Chart	SMC	
2	Injury & Illness Prevention Program	SMC	2/05
3	Emergency Preparedness Manual Draft	SMC	1/19/04
4	"The Lookout" Public Notice; Press Release for HMP Public Input Questionnaire	SMC	3/1/05
5	Space Inventory Report Building Summary Report	Santa Monica Community College District	3/1/2004
6	Five-year Construction Plan 2006/07-2010-11	Santa Monica Community College District	7/01/2004
7	SMC Facilities Update December 1,2003	Facilities Planning SMC	Dec. 2003
8	Property & Casualty Administration; Site Statement of Values	Keenan & Associates	7/14/04
9	College Logo	SMC	3/21/05
10	SMC Campus Site Map Aerial	WWCOT	2004
11	History of SMC Financing and Means of Financing	SMC	
12	Malibu: College Programs, Park & Recreation Master Plan, and current issues	SMC	
13	SMC Campuses drawing	SMC	

General Resources (included as appendices)

#	Title	Source	Date
1	City of Santa Monica DMA 2000 Plan	City of Santa Monica	2004/05
2	City of Malibu Emergency Operations Plan	City of Malibu	

Section 7 Plan Maintenance

Maintenance, Goals and Actions

Plan Maintenance

This section of the Plan describes the formal process that will ensure that the Plan remains an active and relevant document. The plan maintenance process includes a schedule for monitoring and evaluating the Plan annually and producing a plan revision every five years.

This section describes how the Santa Monica-Malibu Unified School District & Santa Monica College 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.

SMMUSD & SMC will be responsible for monitoring the plan annually for updates to jurisdictional goals, objectives, and action items. If needed, these will be coordinated through the SMMUSD & SMC's Hazard Mitigation Planning Committee to integrate these updates into the Plan. The Risk Management Offices of SMMUSD and SMC will be responsible for monitoring the overall Plan for updates on an annual basis. The Chairman will reconvene the Planning Committee as needed to make these updates.

The Plan will be evaluated by Santa Monica-Malibu Unified School District & Santa Monica College 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 SMMUSD & SMC representatives based upon the initial Plan criteria used to draft goals, objectives, and action items for this Plan.

Action items will be reviewed to determine their relevance to changing situations in the District, Los Angeles County Operational Area, as well as changes in State or Federal regulations and policy. SMMUD and SMC Committee Members will assess each portion of the Plan to determine if this information should be updated or modified, given any new available data.

SMMUSD and SMC committee members will be the responsible group for updates to the Plan. All participants will be responsible to provide the Committee Chairperson with department-level updates to the Plan when/if necessary as described above. Every five years the updated plan will be submitted to the State of California and FEMA for review.

SMMUSD & SMC will have the opportunity to implement recommended action items through existing programs and procedures that are deemed appropriate. Upon adoption of the Plan, it can be used as a baseline of information on the hazards that impact the District.

Continued Public Involvement

The Santa Monica-Malibu Unified School District & Santa Monica College is dedicated to involving the public directly in review and updates of the Plan.

Representatives from the Planning Committee 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 Santa Monica-Malibu Unified School District & Santa Monica College website. In addition, copies of the plan will be catalogued and kept at appropriate locations in the Districts. The existence and location of these copies will also be posted on the District website. The site will contain contact information for the Santa Monica-Malibu Unified School District & Santa Monica College DMA 2000 Hazard Mitigation Planning Committee to which people can direct their comments and concerns.

A press release requesting public comments will also be issued after each evaluation or when deemed necessary by the Planning Committee. The press release will direct people to the website or appropriate 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. Committee members will assure the resources are available to publicize the press releases and maintain public involvement through web pages and other appropriate means.

Appendices A

SMMUSD Facility Identification Index

CD Insert Pictures of Buildings

Member	Site	Site Name	Bldg	Bldg Name	Photo Folder	Photo Name
042	001	CABRILLO ELEMENTARY SCHOOL	001	ADMINISTRATION	0130i	image13.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	002	MULTIPURPOSE	0130i	image16.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	003	CLASSROOMS 1- 5	0130i	image14.jpg
042	01	CABRILLO ELEMENTARY SCHOOL	004	CLASSROOMS 6-11	0130i	image15.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	005	CLASSROOMS 12-15	0130i	image17.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	006	CLASSROOMS 16-23	0130i	image18.jpg
042	01	CABRILLO ELEMENTARY SCHOOL	007	LIBRARY	0130i	image19.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	008	PORTABLE A	0130i	image20.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	009	PORTABLE B	0130i	image20.jpg
042	01	CABRILLO ELEMENTARY SCHOOL	010	PORTABLE CLASSROOM 24	sntamn00	mvc-008s.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	011	PORTABLE CLASSROOM 25	sntamn00	mvc-008s.jpg
042	001	CABRILLO ELEMENTARY SCHOOL	099	COVERED PASSAGES		
042	02	EDISON ELEMENTARY SCHOOL	001	ADMINISTRATION	0202i	image16.jpg
042	02	EDISON ELEMENTARY SCHOOL	002	MULTIPURPOSE	0202i	image11.jpg
42	002	EDISON ELEMENTARY SCHOOL	03	CLASSROOM 3	0202i	image13.jpg
042	002	EDISON ELEMENTARY SCHOOL	004	RESTROOM BUILDING 1	0202i	image15.jpg
042	002	EDISON ELEMENTARY SCHOOL	005	COMPUTER LAB	0202i	image12.jpg
042	002	EDISON ELEMENTARY SCHOOL	006	CLASSROOM 5	0202i	image09.jpg
042	002	EDISON ELEMENTARY SCHOOL	007	LIBRARY	0202i	image14.jpg

042	02	EDISON ELEMENTARY SCHOOL	008	CLASSROOM 6	0202i	image08.jpg
042	002	EDISON ELEMENTARY SCHOOL	009	CLASSROOMS 7-11	0202i	image10.jpg
42	002	EDISON ELEMENTARY SCHOOL	010	CLASSROOM 12	0202i	image07.jpg
042	002	EDISON ELEMENTARY SCHOOL	011	CLASSROOM 13	0202i	image05.jpg
042	002	EDISON ELEMENTARY SCHOOL	012	CLASSROOM 14	0202i	image04.jpg
042	002	EDISON ELEMENTARY SCHOOL	013	RESTROOM BUILDING 2	0202i	image06.jpg
42	002	EDISON ELEMENTARY SCHOOL	014	CLASSROOM 15	0202i	image03.jpg
042	002	EDISON ELEMENTARY SCHOOL	015	PORTABLE CLASSROOM 16	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	016	PORTABLE CLASSROOM 17	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	017	PORTABLE CLASSROOM 18	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	018	PORTABLE CLASSROOM 19	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	019	PORTABLE CLASSROOM 20	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	020	PORTABLE CLASSROOM 21	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	021	PORTABLE CLASSROOM 22	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	022	PORTABLE CLASSROOM 23	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	023	PORTABLE CLASSROOM 24	0202i	image02.jpg
042	002	EDISON ELEMENTARY SCHOOL	024	PORTABLE CLASSROOM 25	0202i	image01.jpg
042	002	EDISON ELEMENTARY SCHOOL	025	PORTABLE CLASSROOM 26	0202i	image01.jpg
042	002	EDISON ELEMENTARY SCHOOL	026	PORTABLE CLASSROOM 27	0202i	image01.jpg
042	002	EDISON ELEMENTARY SCHOOL	027	PORTABLE CLASSROOM 28	0202i	image01.jpg
042	002	EDISON ELEMENTARY SCHOOL	028	PORTABLE CLASSROOM 29	sntamn00	mvc-005s.jpg
042	002	EDISON ELEMENTARY SCHOOL	099	COVERED PASSAGES		
042	003	FRANKLIN ELEMENTARY SCHOOL	001	ADMINISTRATION/CLASSROOMS	0130i	image02.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	002	MULTIPURPOSE	042	003-002.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	003	KINDERGARTEN	042	003-003.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	004	CLASSROOMS 8-14	042	003-004.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	005	CLASSROOMS 15-17	042	003-005.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	006	CLASSROOMS 18-20	042	003-006.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	007	LIBRARY	042	003-007.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	008	PORTABLE CLASSROOM 28	042	003-008-011014-015.jpg
	003	FRANKLIN ELEMENTARY SCHOOL	009	PORTABLE CLASSROOM 27	042	003-008-011014-015.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	010	PORTABLE CLASSROOM 26	042	003-008-011014-015.jpg

042	003	FRANKLIN ELEMENTARY SCHOOL	011	PORTABLE CLASSROOM 25	042	003-008-011014-015.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	012	PORTABLE CLASSROOM 23	042	003-012.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	013	PORTABLE CLASSROOM 24	042	003-013.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	014	PORTABLE CLASSROOM 39	042	003-008-011014-015.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	015	PORTABLE CLASSROOM 40	042	003-008-011014-015.jpg
042	003	FRANKLIN ELEMENTARY SCHOOL	099	COVERED PASSAGES		
042	004	GRANT ELEMENTARY SCHOOL	001	CLASSROOMS 2- 5	0209i	image33.jpg
042	004	GRANT ELEMENTARY SCHOOL	002	CLASSROOMS 10-13	0209i	image32.jpg
042	004	GRANT ELEMENTARY SCHOOL	003	ADMINISTRATION/CLASSROOMS	0209i	image34.jpg
042	004	GRANT ELEMENTARY SCHOOL	004	CLASSROOMS 26-29	0209i	image30.jpg
042	004	GRANT ELEMENTARY SCHOOL	005	CLASSROOMS 30-31	0209i	image29.jpg
042	004	GRANT ELEMENTARY SCHOOL	006	RESTROOM BUILDING 1	0209i	image28.jpg
042	004	GRANT ELEMENTARY SCHOOL	007	RESTROOM BUILDING 2	0209i	image27.jpg
042	004	GRANT ELEMENTARY SCHOOL	008	CLASSROOMS 37-40	0209i	image22.jpg
042	004	GRANT ELEMENTARY SCHOOL	009	CAFETERIA/CLASSROOMS	0209i	image23.jpg
042	004	GRANT ELEMENTARY SCHOOL	010	LIBRARY/CLASSROOMS	0209i	image26.jpg
042	004	GRANT ELEMENTARY SCHOOL	011	AUDITORIUM	0209i	image35.jpg
042	004	GRANT ELEMENTARY SCHOOL	012	PORTABLE CLASSROOM 70	0209i	image21.jpg
042	004	GRANT ELEMENTARY SCHOOL	013	PORTABLE CLASSROOM 71	0209i	image21.jpg
042	004	GRANT ELEMENTARY SCHOOL	014	PORTABLE CLASSROOM 72	0209i	image21.jpg
042	004	GRANT ELEMENTARY SCHOOL	015	PORTABLE CLASSROOM 73	0209i	image21.jpg
042	004	GRANT ELEMENTARY SCHOOL	016	PORTABLE CLASSROOM 74	0209i	image21.jpg
042	004	GRANT ELEMENTARY SCHOOL	017	PORTABLE CLASSROOM 75	0209i	image21.jpg
042	004	GRANT ELEMENTARY SCHOOL	099	COVERED PASSAGES		
042	005	MCKINLEY ELEMENTARY	001	ADMINISTRATION/CLASSROOMS	042	005-001.jpg
042	005	MCKINLEY ELEMENTARY	002	CLASSROOMS 107-110, 207-210	042	005-002.jpg
042	005	MCKINLEY ELEMENTARY	003	CAFETERIA	042	005-003.jpg
042	005	MCKINLEY ELEMENTARY	004	KINDERGARTEN	042	005-004.jpg
042	005	MCKINLEY ELEMENTARY	005	PORTABLE CLASSROOM B1	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	006	PORTABLE CLASSROOM B2	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	007	PORTABLE CLASSROOM B3	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	008	PORTABLE CLASSROOM B4	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	009	PORTABLE CLASSROOM B5	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	010	PORTABLE CLASSROOM B6	042	005-005-013.jpg

042	005	MCKINLEY ELEMENTARY	011	PORTABLE CLASSROOM B7	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	012	PORTABLE CLASSROOM B8	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	013	PORTABLE CLASSROOM B9	042	005-005-013.jpg
042	005	MCKINLEY ELEMENTARY	099	COVERED PASSAGES		
042	006	OLD JOHN MUIR ELEMENTARY	001	ADMINISTRATION/CLASSROOMS	0202i	image32.jpg
042	006	OLD JOHN MUIR ELEMENTARY	002	CLASSROOMS 12-17	0202i	image33.jpg
042	006	OLD JOHN MUIR ELEMENTARY	003	CLASSROOMS 9-10	0202i	image35.jpg
042	006	OLD JOHN MUIR ELEMENTARY	004	CLASSROOMS 18-19	0202i	image34.jpg
042	006	OLD JOHN MUIR ELEMENTARY	005	CLASSROOM 20	0202i	image34.jpg
042	006	OLD JOHN MUIR ELEMENTARY		CLASSROOM 21	0202i	image34.jpg
042	006	OLD JOHN MUIR ELEMENTARY	007	CLASSROOM 22	0202i	image34.jpg
042	006	OLD JOHN MUIR ELEMENTARY	008	CLASSROOM 23	0202i	image34.jpg
042	006	OLD JOHN MUIR ELEMENTARY	009	PORTABLE OFFICE	sntamn00	mvc-017f.jpg
042	006	OLD JOHN MUIR ELEMENTARY	010	PORTABLE CHILD CARE	sntamn00	mvc-017f.jpg
042	006	OLD JOHN MUIR ELEMENTARY	011	PORTABLE CHILD CARE	sntamn00	mvc-017f.jpg
042	006	OLD JOHN MUIR ELEMENTARY	012	PORTABLE LOUNGE	sntamn00	mvc-017f.jpg
042	006	OLD JOHN MUIR ELEMENTARY	099	COVERED PASSAGES		
042	007	WILL ROGERS ELEMENTARY	001	ADMINISTRATION/CLASSROOMS	0202i	image25.jpg
042	007	WILL ROGERS ELEMENTARY	002	MULTIPURPOSE	0202i	image26.jpg
042	007	WILL ROGERS ELEMENTARY	003	KINDERGARTEN	0202i	image24.jpg
042	007	WILL ROGERS ELEMENTARY	004	CLASSROOM 500 WING	0202i	image18.jpg
042	007	WILL ROGERS ELEMENTARY	005	CLASSROOM 400 WING	0202i	image19.jpg
042	007	WILL ROGERS ELEMENTARY	006	CLASSROOM 300 WING	0202i	image20.jpg
042	007	WILL ROGERS ELEMENTARY	007	CLASSROOM 200 WING	0202i	image21.jpg
042	007	WILL ROGERS ELEMENTARY	08	CLASSROOM 100 WING	0202i	image22.jpg
042	007	WILL ROGERS ELEMENTARY	009	CLASSROOM 106	0202i	image27.jpg
042	007	WILL ROGERS ELEMENTARY	010	CLASSROOM 206	0202i	image28.jpg
042	007	WILL ROGERS ELEMENTARY	011	CLASSROOM 306	0202i	image29.jpg
042	007	WILL ROGERS ELEMENTARY	012	CLASSROOM 406	0202i	image31.jpg
042	007	WILL ROGERS ELEMENTARY	013	CLASSROOM 506	0202i	image30.jpg
042	007	WILL ROGERS ELEMENTARY	014	PORTABLE CLASSROOM 3	0202i	image23.jpg
042	007	WILL ROGERS ELEMENTARY	015	PORTABLE CLASSROOM 4	0202i	image23.jpg

042	007	WILL ROGERS ELEMENTARY	016	PORTABLE CLASSROOM 5	0202i	image23.jpg
042	007	WILL ROGERS ELEMENTARY	017	PORTABLE CLASSROOM 408	0202i	image23.jpg
042	007	WILL ROGERS ELEMENTARY	018	PORTABLE CLASSROOM 407	0202i	image23.jpg
042	007	WILL ROGERS ELEMENTARY	019	PORTABLE CLASSROOM 6	sntamn00	mvc-003s.jpg
042	007	WILL ROGERS ELEMENTARY	099	COVERED PASSAGES		
042	008	ROOSEVELT ELEMENTARY SCHOOL	001	ADMINISTRATION/CLASSROOMS	042	008-001.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	002	AUDITORIUM	042	008-002.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	003	CAFETERIA	042	008-003.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	004	TEACHERS WORKROOM	042	008-004.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	005	CLASSROOMS 6- 9	042	008-005.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	006	STORAGE ROOM	042	008-006.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	007	GIRLS RESTROOM 1	042	008-007.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	008	CLASSROOMS 10-13	042	008-008.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	009	MEDIA CENTER/CLASSROOMS	042	008-009.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	010	BOYS RESTROOM	042	008-010.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	011	GIRLS RESTROOM 2	042	008-011.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	012	CLASSROOMS 14-18	042	008-012.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	013	PORTABLE CLASSROOMS B 5-B 6	042	008-013.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	014	CLASSROOM 5	042	008-014.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	015	PORTABLE CLASSROOM B 4	042	008-015.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	016	GIRLS RESTROOM 3	042	008-016.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	017	KINDERGARTEN	042	008-017.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	018	PORTABLE CLASSROOMS B 1	042	008-018.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	019	PORTABLE CLASSROOMS B 2-B 3	042	008-019.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	020	PORTABLE CLASSROOMS B 7	042	008-020-024.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	021	PORTABLE CLASSROOMS B 8	042	008-020-024.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	022	PORTABLE CLASSROOMS B 9	042	008-020-024.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	023	PORTABLE CLASSROOMS B10	042	008-020-024.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	024	PORTABLE CLASSROOMS B11	042	008-020-024.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	025	PORTABLE CLASSROOM B-12	sntamn00	mvc-001s.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	026	PORTABLE CLASSROOM B-13	sntamn00	mvc-001s.jpg
042	008	ROOSEVELT ELEMENTARY SCHOOL	099	COVERED PASSAGES		
042	009	WEBSTER ELEMENTARY SCHOOL	001	ADMINISTRATION	0130i	image36.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	002	MULTIPURPOSE	0130i	image32.jpg

042	009	WEBSTER ELEMENTARY SCHOOL	003	CLASSROOMS 1- 4	0130i	image33.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	004	CLASSROOMS 8-10	0130i	image34.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	005	CLASSROOMS 13-16	0130i	image29.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	006	CLASSROOMS 17-20	0130i	image30.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	007	KINDERGARTEN	0130i	image31.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	008	LIBRARY/CLASSROOMS	0130i	image35.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	009	PORTABLE CLASSROOM 21	sntamn00	mvc-006s.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	010	PORTABLE CLASSROOM 22	sntamn00	mvc-006s.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	011	PORTABLE CLASSROOM 23	sntamn00	mvc-006s.jpg
042	009	WEBSTER ELEMENTARY SCHOOL	099	COVERED PASSAGES		
042	010	JOHN ADAMS MIDDLE SCHOOL	001	ADMINISTRATION/CLASSROOMS	0209i	image13.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	002	CLASSROOMS 16-18	0209i	image07.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	003	CLASSROOMS 10-13	0209i	image06.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	004	CLASSROOMS 22, 24	0209i	image19.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	005	ATTENDANCE/CLASSROOMS	0209i	image05.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	006	CLASSROOMS 50-53	0209i	image03.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	007	CLASSROOMS 54-57	0209i	image04.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	008	AUDITORIUM	0209i	image20.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	009	MUSIC BUILDING	0209i	image01.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	010	CLASSROOMS 70-73	0209i	image02.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	011	NURSERY	0209i	image18.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	012	CLASSROOMS 82-83	0209i	image17.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	013	CLASSROOMS 84-86	0209i	image16.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	014	CLASSROOMS 87-89	0209i	image15.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	015	CLASSROOMS 90-91	0209i	image14.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	016	CAFETERIA	0209i	image10.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	017	CLASSROOM 47	0209i	image11.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	018	LIBRARY/CLASSROOMS	0209i	image12.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	019	GYM/LOCKERS	0209i	image09.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	020	INDUSTRIAL ARTS	0209i	image08.jpg
042	010	JOHN ADAMS MIDDLE SCHOOL	099	COVERED PASSAGES		
042	011	LINCOLN MIDDLE SCHOOL	001	ADMINISTRATION/CLASSROOMS	0207i	image08.jpg
042	011	LINCOLN MIDDLE SCHOOL	002	CLASSROOM 310	0207i	image03.jpg
042	011	LINCOLN MIDDLE SCHOOL	003	CLASSROOM 300 WING	0207i	image02.jpg

042	011	LINCOLN MIDDLE SCHOOL	004	CAFETERIA	0207i	image09.jpg
042	011	LINCOLN MIDDLE SCHOOL	005	GYMNASIUM	0207i	image01.jpg
042	011	LINCOLN MIDDLE SCHOOL	006	CLASSROOM 500 WING	0207i	image06.jpg
042	011	LINCOLN MIDDLE SCHOOL	007	POOL/LOCKER ROOMS	0207i	image07.jpg
042	011	LINCOLN MIDDLE SCHOOL	008	CLASSROOM 400 WING	0207i	image04.jpg
042	011	LINCOLN MIDDLE SCHOOL	009	AUDITORIUM	0207i	image10.jpg
042	011	LINCOLN MIDDLE SCHOOL	010	COVERED PASSAGES		
042	012	MALIBU HIGH SCHOOL	001	LIBRARY	0130i	image03.jpg
042	012	MALIBU HIGH SCHOOL	002	ADMINISTRATION/CLASSROOMS	0130i	image04.jpg
042	012	MALIBU HIGH SCHOOL	003	CLASSROOMS 101-212	0130i	image01.jpg
042	012	MALIBU HIGH SCHOOL	004	CLASSROOMS 1-10	0130i	image02.jpg
042	012	MALIBU HIGH SCHOOL	005	MUSIC BUILDING	0130i	image05.jpg
042	12	MALIBU HIGH SCHOOL	006	INDUSTRIAL ARTS	0130i	image07.jpg
042	012	MALIBU HIGH SCHOOL	007	MULTIPURPOSE	0130i	image12.jpg
042	012	MALIBU HIGH SCHOOL	008	ART BUILDING	0130i	image06.jpg
042	012	MALIBU HIGH SCHOOL	009	GYMNASIUM	0130i	image11.jpg
042	012	MALIBU HIGH SCHOOL	010	CUSTODIANS OFFICE	0130i	image08.jpg
042	012	MALIBU HIGH SCHOOL	011	POOL BUILDING	0130i	image10.jpg
042	012	MALIBU HIGH SCHOOL	012	POOL	0130i	image09.jpg
042	012	MALIBU HIGH SCHOOL	013	PORTABLE CLASSROOM 511	sntamn00	mvc-007s.jpg
042	012	MALIBU HIGH SCHOOL	014	PORTABLE CLASSROOM 512	sntamn00	mvc-007s.jpg
042	012	MALIBU HIGH SCHOOL	015	PORTABLE CLASSROOM 513	sntamn00	mvc-007s.jpg
042	012	MALIBU HIGH SCHOOL	099	COVERED PASSAGES		
042	014	SANTA MONICA HIGH SCHOOL	001	AUXILLARY GYMNASIUM	0207i	image28.jpg
042	014	SANTA MONICA HIGH SCHOOL	02	POOL BUILDING	0207i	image27.jpg
042	014	SANTA MONICA HIGH SCHOOL	003	MAIN GYMNASIUM	0207i	image26.jpg
042	014	SANTA MONICA HIGH SCHOOL	004	MUSIC BUILDING	0207i	image22.jpg
042	014	SANTA MONICA HIGH SCHOOL	005	AUDITORIUM	0207i	image23.jpg
042	014	SANTA MONICA HIGH SCHOOL	006	ADMINISTRATION	0207i	image21.jpg
042	014	SANTA MONICA HIGH SCHOOL	007	CAFETERIA	0207i	image20.jpg
042	014	SANTA MONICA HIGH SCHOOL	008	BUSINESS BUILDING	0207i	image24.jpg
042	014	SANTA MONICA HIGH SCHOOL	009	HISTORY BUILDING	0207i	image18.jpg
042	014	SANTA MONICA HIGH SCHOOL	010	ART BUILDING	0207i	image15.jpg
042	014	SANTA MONICA HIGH SCHOOL	011	ENGLISH BUILDING	0207i	image16.jpg

042	014	SANTA MONICA HIGH SCHOOL	012	CLASSROOM T	0207i	image17.jpg
042	014	SANTA MONICA HIGH SCHOOL	013	SCIENCE BUILDING	0207i	image14.jpg
042	014	SANTA MONICA HIGH SCHOOL	014	TECHNICAL BUILDING	0207i	image13.jpg
042	014	SANTA MONICA HIGH SCHOOL	015	LANGUAGE BUILDING	0207i	image19.jpg
042	014	SANTA MONICA HIGH SCHOOL	018	STORAGE GARAGE	0207i	image31.jpg
042	014	SANTA MONICA HIGH SCHOOL	019	CLASSROOM B205	sntamn00	mvc-002s.jpg
042	014	SANTA MONICA HIGH SCHOOL	099	COVERED PASSAGES		
042	015	OLD SMASH-LEASED CHILDCARE	001	ADMINISTRATION/CLASSROOMS	042	015-001.jpg
042	015	OLD SMASH-LEASED CHILDCARE	002	CHILD DEVELOPMENT SERVICES	042	015-002.jpg
042	015	OLD SMASH-LEASED CHILDCARE	003	ADMINSTRATIVE SERVICES	042	015-003.jpg
042	015	OLD SMASH-LEASED CHILDCARE	099	COVERED PASSAGES		
042	018	LEASED CHILD CARE	001	CHILD CARE CENTER	042	018-001.jpg
042	018	LEASED CHILD CARE	002	CHILD CARE CENTER	042	018-002.jpg
042	020	DISTRICT OFFICE	001	MAIN BUILDING	0319i	image33.jpg
042	020	DISTRICT OFFICE	099	COVERED PASSAGES		
042	021	TRANSPORTATION YARD	001	BUS YARD OFFICE	042	021-001.jpg
042	022	MALIBU MAINT/TRANSPORTATION	001	MAINTENANCE BUILDING	0130i	image21.jpg
042	022	MALIBU MAINT/TRANSPORTATION	002	BUS GARAGE	0130i	image22.jpg
042	023	MALIBU COMMUNITY CENTER	001	BUILDING A	0130i	image27.jpg
042	023	MALIBU COMMUNITY CENTER	002	BUILDING B	0130i	image28.jpg
042	023	MALIBU COMMUNITY CENTER	003	BUILDING C	0130i	image25.jpg
042	023	MALIBU COMMUNITY CENTER	004	BUILDING D	0130i	image24.jpg
042	023	MALIBU COMMUNITY CENTER	005	BUILDING E	0130i	image26.jpg
042	023	MALIBU COMMUNITY CENTER	006	BUILDING F	0130i	image23.jpg
042	023	MALIBU COMMUNITY CENTER	099	COVERED PASSAGES		
042	024	JOHN MUIR/SMASH	001	ADMINISTRATION	sntamn00	mvc-012s.jpg
042	024	JOHN MUIR/SMASH	002	MULTIPURPOSE/CLASSROOMS	sntamn00	mvc-016s.jpg
042	024	JOHN MUIR/SMASH	003	CLASSROOM BUILDING 500	sntamn00	mvc-011s.jpg
042	024	JOHN MUIR/SMASH	004	CLASSROOM BUILDING 600	sntamn00	mvc-010s.jpg
042	024	JOHN MUIR/SMASH	005	CLASSROOM 440	sntamn00	mvc-013s.jpg
042	024	JOHN MUIR/SMASH	006	STORAGE	sntamn00	mvc-014s.jpg
042	024	JOHN MUIR/SMASH	007	RESTROOM BUILDING	sntamn00	mvc-015s.jpg
042	024	JOHN MUIR/SMASH	008	PORTABLE CLASSROOM A	sntamn00	mvc-009s.jpg
042	024	JOHN MUIR/SMASH	009	PORTABLE CLASSROOM B	sntamn00	mvc-009s.jpg

042	024	JOHN MUIR/SMASH	010	PORTABLE CLASSROOM C	sntamn00	mvc-009s.jpg
042	024	JOHN MUIR/SMASH	011	PORTABLE CLASSROOM D	sntamn00	mvc-009s.jpg
042	024	JOHN MUIR/SMASH	099	COVERED PASSAGES		
042	11A	LINCOLN CHILD DEVELOP CTR	001	CHILD CARE	0207i	image11.jpg

Appendices B

City of Santa Monica, CA DMA 2000 Plan

Working Draft Insert

Appendices C

City of Malibu

Emergency Operations Plan