

PBEE to Promote Discounts for Single- family Dwellings

Janiele Maffei

Chief Mitigation Officer

California Earthquake Authority



It could happen today.

PEER Annual Meeting

January 17, 2019

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Chief Mitigation Officer

CEA CALIFORNIA
EARTHQUAKE
AUTHORITY™

CEA

**CEA is a
not-for-profit residential
earthquake insurer.**

CALIFORNIA: MANDATORY OFFER LAW



Earthquake coverage is excluded from homeowners insurance policy

However, insurance companies are required to offer a separate earthquake insurance policy at time of homeowner policy sale.

CEA: ESTABLISHED IN THE WAKE OF NORTHRIDGE EQ

January 17, 1994

Los Angeles Times

CIRCULATION:
13,300 DAILY / 142,197 SUNDAY

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DAILY
DISTRIBUTION AREAS: HIGHWAY

33 Die, Many Hurt in 6.6 Quake L.A. Area Freeways Buckle, Buildings Topple

Sylmar Jolted by Ghosts of Horror Past

■ **History:** The city that crumpled under a 6.5 quake in 1971 remembers well the terror that came when the earth gave way. On Monday, it seemed like it was cursed.

By CRAIG TURNER
and RICHARD E. MEYER
TIMES STAFF WRITERS

Deane Hess had nearly conquered her fear when she felt it again. That's why it was so terrifying. It was happening again. She and her husband, David, were in bed, just like the last time. In a mobile home, fact, the same mobile home, at the same trailer park.

"The one felt much worse," she said afterward, calm but able to remember every tremor, then the shaking, then the violence. "It was much harder, a hard job. The TI did not sway. It simply slammed David and Deane Hess and their community apart."

Sylmar does not look cursed. It is just half an hour from the heart of Los Angeles, but rural enough for

But at 4:31 a.m. Monday, in the quiet darkness, ruin struck with thunder and vengeance—for a second time. It trampled Sylmar and its miles of mobile homes, and when the shaking finally stopped, roads had crumbled, structures had collapsed.

Please see SYLMAR, A9

To Our Readers

The Times today publishes a special report, "Coping With the Quake," a resources guide that includes information on clean-up, and how to go back to work.

This material



The body of LAPD Officer Clarence W. Dean lies near his motorcycle, which plunged off the Antelope Valley Freeway overpass that col-

lapsed onto the Golden State Freeway during Monday's earthquake. The 6.6 temblor closed at least 11 major freeways or interchanges.

JONATHAN ALDRED / THE TIMES

Thrust Faults Pose Brutal Danger to Basin

By ROBERT LEE HOTZ
and KENNETH REICH
TIMES STAFF WRITERS

The earthquake that convulsed the San Fernando Valley early as possible the danger posed by a thrust fault underlying the Los Angeles Basin.

Commuters Will Face Nightmare for Months

■ **Transportation:** Several freeway sections are shut. Golden State, Santa Monica routes are heavily damaged.

By NORA ZAMICHOW
and RALPH FRAMMOLINO
TIMES STAFF WRITERS

The 10-second earthquake that rocked Southern California early Monday will create a commuting

300,000 cars a day.

"We've got some major problems—people are going to be using city streets for a period of time," said Ken N...

Questions on Reinforcing of Freeways Raised

By VIRGINIA ELLIS
and DAVID FERRELL
TIMES STAFF WRITERS

With sobering force, the earthquake devastated Southern Calif. roadway...

■ **Disaster:** Epicenter is in Northridge, where three-story apartment complex pancakes. Ruptured gas lines erupt in fire in strongest temblor in city's modern history.

By TRACEY KAPLAN
and GREG KRIBKIAN
TIMES STAFF WRITERS

A deadly magnitude 6.6 earthquake—the strongest in modern Los Angeles history—ripped through the pre-dawn darkness Monday, awakening Southern California with a violent convulsion

which flattened freeways, sand-lined and left emergency crews searching desperately for bodies trapped under the rubble.

The 10-second temblor, which was not the long-dreaded Big One but erupted so fiercely that it initially seemed every bit as intense, was blamed for at least 33 deaths—nearly half of which occurred when a three-floor apartment complex near the epicenter in Northridge collapsed into two stories.

Triggered by a fault that squeezed the northern San Fernando Valley between two mountain ranges like a vice, the 4:31 a.m. earthquake swamped hospitals and left thousands more homeless as fires, floods and landslides dotted a landscape that has been visited by destruction with disturbing regularity.

The major developments.

■ The death toll continued to grow throughout the day. Fifteen bodies were discovered under the rubble of what had been the Northridge Meadows apartments.

Other victims of the quake included a Los Angeles police officer who sheared off freeway, a Siskiyou resident who may have hurled himself out the sixth-floor window of a Downtown hotel and a Rancho Cucamonga mother who slipped on a toy as she raced to check on her

her head on the crib. See JOLT, A10

1994: NORTHRIDGE EARTHQUAKE



Total Property Damage

➤ \$40 Billion

Residential

➤➤ \$20 Billion

Insured Residential

➤➤➤ \$10 Billion

Aftermath

Most insurance companies stopped writing Homeowners insurance

PUBLICLY MANAGED • PRIVATELY FINANCED

A not-for-profit provider of residential earthquake insurance

GOVERNING BOARD:

Governor

Insurance Commissioner

State Treasurer

Non Voting:

Assembly Speaker and Senate Rules Chair

PRIVATELY FINANCED:

1,048,000 Policyholders

MISSION:

Educate

Mitigate

Insure

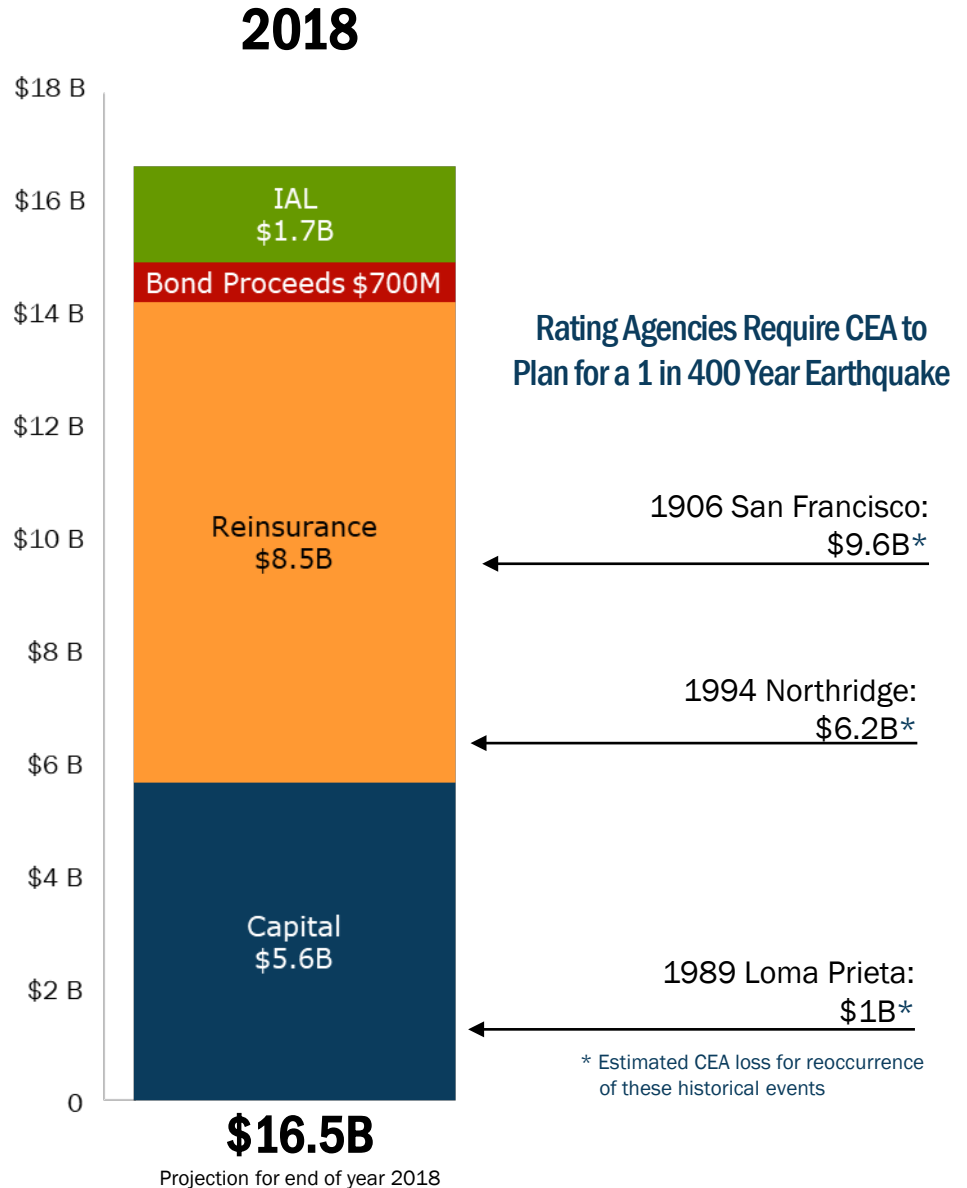
**THE STRENGTH
TO REBUILD®**



CEA FINANCIAL STRENGTH

Rated as A- (Excellent) by A.M. Best Co.

CLAIM-PAYING CAPACITY:
\$16.5 Billion



**Northridge EQ
highlighted that
earthquake damage
control needed for
woodframed structures**

CUREE/Caltech Woodframe Project

Project Director:
**Robert Reitherman, Executive
Director, CUREE**

Project Manager:
Professor John Hall, Caltech

Funded by FEMA

CUREE/Caltech Woodframe Project

Element 1: Testing and Analysis

André Filiatrault

Element 2: Field Investigations,

G. G. Schierle

**Element 3: Building Codes and
Standards, Kelly Cobeen**

Element 4: Economic Aspect,

L. Thomas Tobin

**Element 5: Education and
Outreach, Jill Andrews**

**Northridge EQ Also
highlighted need for
woodframe earthquake
damage assessment
tools**

CUREE EDA-02

CUREE Publication No. EDA-02

GENERAL GUIDELINES FOR THE ASSESSMENT AND REPAIR OF EARTHQUAKE DAMAGE IN RESIDENTIAL WOODFRAME BUILDINGS



Consortium of Universities for Research in Earthquake Engineering

CUREE EDA-02

Lead author and editor:

Dr. John Osteraas

**Funded by the California
Earthquake Authority**

**CEA takes bold steps to
embark on a
meaningful earthquake
damage mitigation
program**

CEA Mitigation Program

ADOPTION OF RETROFIT STANDARDS

2010 Adoption of Chapter A3 into the IEBC

LEADERSHIP

Legislation to create a Chief Mitigation Officer
Janiele Maffei, S.E. hired as CMO in 2011

RETROFIT INCENTIVES

Development of California Residential Mitigation
Program and the Earthquake Brace and Bolt Program

FUND RESEARCH

ATC 110/ FEMA P-1100

CEA / PEER Project

ATC 143 Update of CUREE Guidelines

EarthquakeBraceBolt.com

Financial Incentive for Qualifying Homeowners



Reimburse up to \$3,000 for code-compliant retrofit

For Homeowners to qualify:

- Owner occupied
- Available to all Californians

For Houses to qualify:

- EBB ZIP Code
- Houses constructed pre-1980
- Raised continuous perimeter concrete foundation
- Have wood-framed walls (cripple walls) in the crawl space

EarthquakeBraceBolt.com

Financial Incentive for Qualifying Homeowners



RETROFITS
MINIMIZING EARTHQUAKE DAMAGE

ONE  AT A TIME

EarthquakeBraceBolt.com

ATC 110/FEMA P-1100

CEA/PEER Project

- **Develop evaluation and retrofit methodologies and prescriptive plan sets for the retrofit of single-family residential woodframe houses**
- **Quantify the expected reduction in damage for the retrofitted residential houses**

Our presenters:

Kelly Cobeen, S.E.
Dr. David Welch
