

# Managing Earthquakes

## BEFORE

*The 3 Ps!*

**PREDICTION**

**PREPARATION**

**PREVENTION**

## AFTER

*The 3 Rs!*

**RESPONSE**

**RECOVERY**

**RECONSTRUCTION**

### Why is there so much emphasis on California residents filling out **EARTHQUAKE PREPAREDNESS PLANS**?

Earthquake Preparedness Plan	Earthquake Preparedness Plan
<p><b>Before the earthquake:</b></p> <ul style="list-style-type: none"><li>• What can you do to make your home safer?</li> <li>• What will you put into your earthquake kit? How many earthquake kits should your home have? (e.g., one for the house and one for the car, one on each floor?) Where will you keep it?</li></ul>	<p><b>After the earthquake:</b></p> <ul style="list-style-type: none"><li>• How will you, your family, your school, your workplace re-connect with family members and loved ones if the earthquake occurs during school hours?</li> <li>• How will you contact family members if you get separated? How can you easily check each other are safe?</li></ul>
<p><b>During the earthquake:</b></p> <ul style="list-style-type: none"><li>• What can you do to protect yourself during the earthquake (e.g., drop, cover and hold on)?</li> <li>• What should you do if you are indoors when an earthquake occurs?</li> <li>• What should you do if you are outdoors when an earthquake occurs?</li></ul>	<p>An earthquake could strike at any time. Write a to-do list to ensure you are fully prepared...</p>

In an earthquake situation who is in charge of **YOUR** safety?



The Great  
California  
**Shake  
Out**<sup>TM</sup>



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## GET READY TO SHAKEOUT!

You are invited to [join](#) millions of people who will [Drop, Cover, and Hold On](#) at 10:17 a.m. on October 17th\* in the 2013 *Great California ShakeOut!*

Last year more than 19.4 million people were registered in ShakeOut drills [worldwide](#). Participating is a great way for [your family or organization](#) to be prepared to survive and recover quickly from big earthquakes.

[Start here](#) to be included in the 2013 ShakeOut!

\* You can hold your drill at any time within 2 weeks of October 17th.



## LEARN THE LATEST

### [How to Participate](#)

Information for individuals, schools and many types of organizations

### [Who is Participating?](#)

Lists by county, area, & category

### [ShakeOut Resources](#)

"Drill Broadcast" recordings, manuals, videos, posters, & much more

### [Share your ShakeOut!](#)

Share your photos, videos, and stories, and view others

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## PLAN YOUR DRILL

How to plan your drill & get prepared...

Select your category:  [Go](#)



## CHECK THE STATS

**2.1 million**



2012 Participants



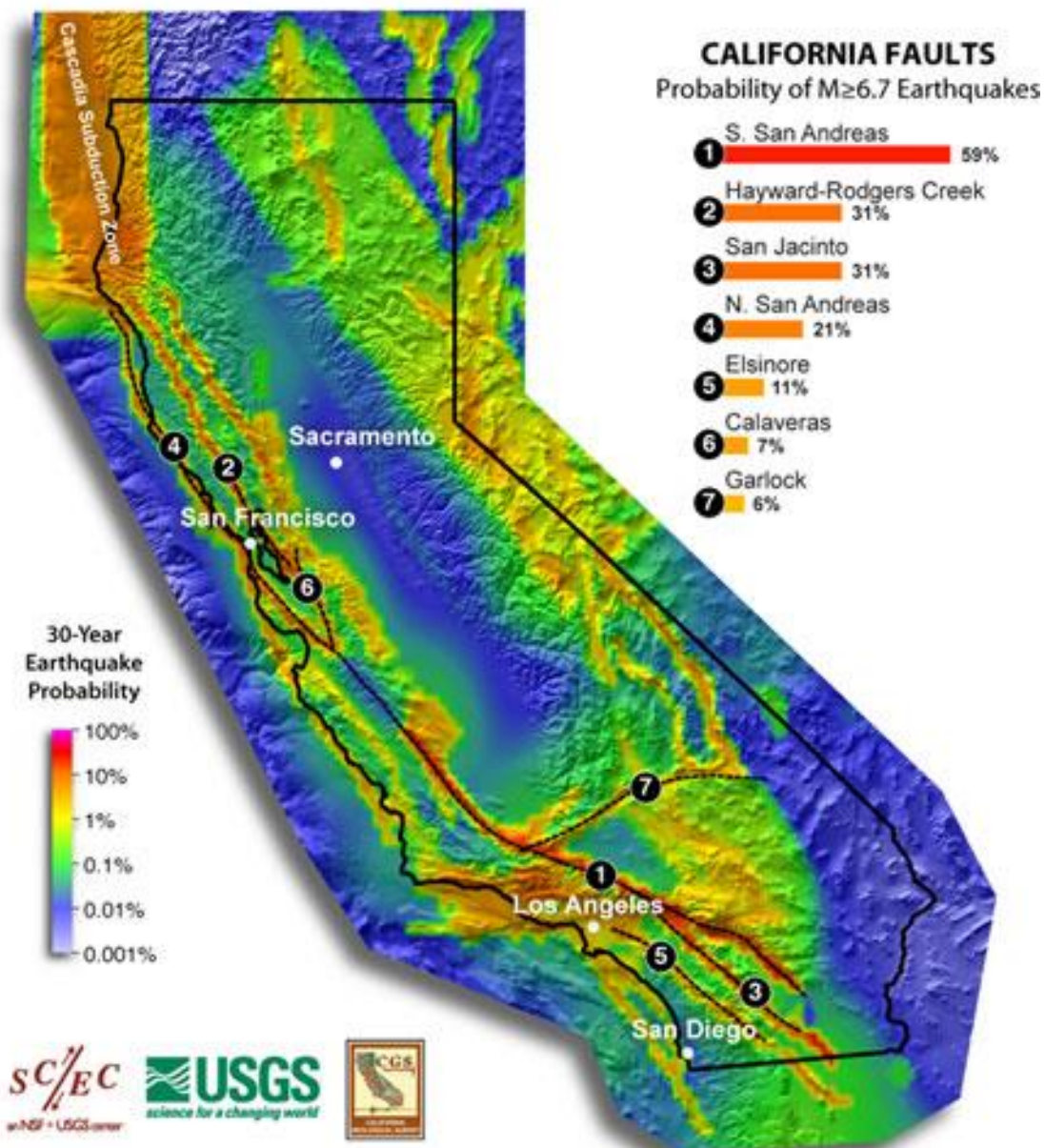
## PLAY AND SHARE



# Moving to California?!

## PREDICTION

How do they know a big one's on the way?!



## NATIONAL GEOGRAPHIC NEWS

REPORTING YOUR WORLD DAILY

Thursday, October 28, 2010

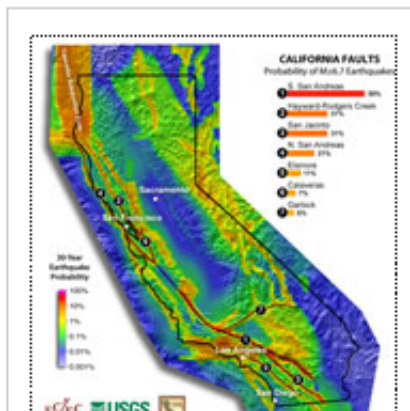
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### Big Quake "Guaranteed" to Hit California by 2037

Alicia Chang, AP Science Writer, in Los Angeles  
Associated Press  
April 14, 2008

California faces an almost certain risk of being rocked by a strong earthquake by 2037, according to the first statewide temblor forecast, released today.

New calculations reveal there is a 99.7 percent chance a magnitude 6.7 quake or larger will strike in the next 30 years.



The odds of such an event are higher in southern California than northern California—97 percent versus 93 percent.

(Related: "[Major Quake May Strike Bay Area Next Year, Experts Say](#)" [December 12, 2007].)

The last time a jolt this size rattled California was the 1994 Northridge disaster, which killed 72 people, injured more than 9,000, and caused \$25 billion (U.S.) in damage.



#### LATEST PHOTO NEWS

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[SPACE PHOTOS THIS WEEK: Tiny Galaxy, Sun's Iron, More](#)

[SPACE PHOTOS THIS WEEK: Tiny Galaxy, Sun's Iron, More](#)



[SPACE PHOTOS THIS WEEK: Star Birth, Active Sun, More](#)

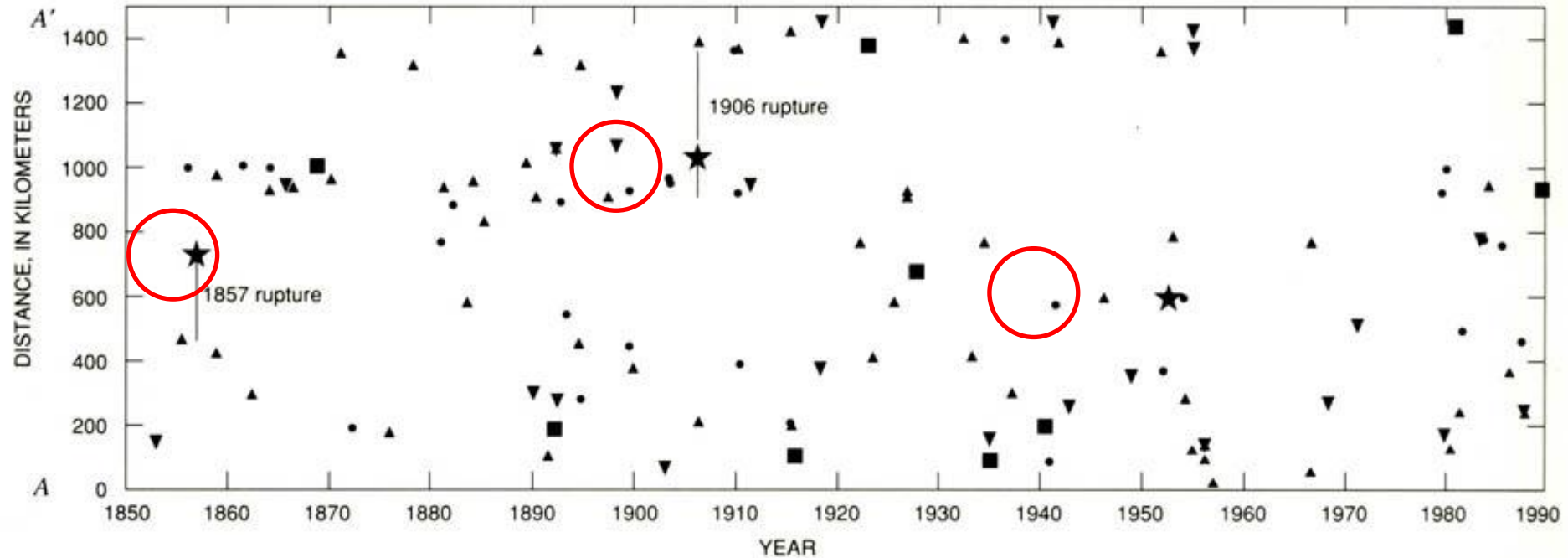
#### More Photos in the News

# Moving to California?!

## PREDICTION

### Pattern Recognition – using past earthquakes to predict future ones...

Source: United States Geological Survey



1. What does this suggest about the risk of a large earthquake (bigger than 7.5) in California?

2. Can you suggest a **date** it might occur?

3. Can you suggest a **location**?

#### EXPLANATION

##### Magnitude

• ≥ 5.5

▲ ≥ 6.0

▼ ≥ 6.5

■ ≥ 7.0

★ ≥ 7.5

# Moving to California?!

## PREDICTION



Some of the more pioneering methods being developed in California...

### Relevant to San Francisco:

3.30 to 10mins – faults, causes of earthquakes, and attempts to predict Parkfield California earthquake

17 mins-23.30 – mapping California faults, 1906 earthquake in SF, measuring offset

34 mins – 37 mins – UCLA earthquake prediction using pattern theory

41 mins – NASA electric currents from fracturing rock, earthquake lights

44 mins – California Quakefinder computer system

47 - 49mins – earthquake proof buildings and roads and land use restrictions

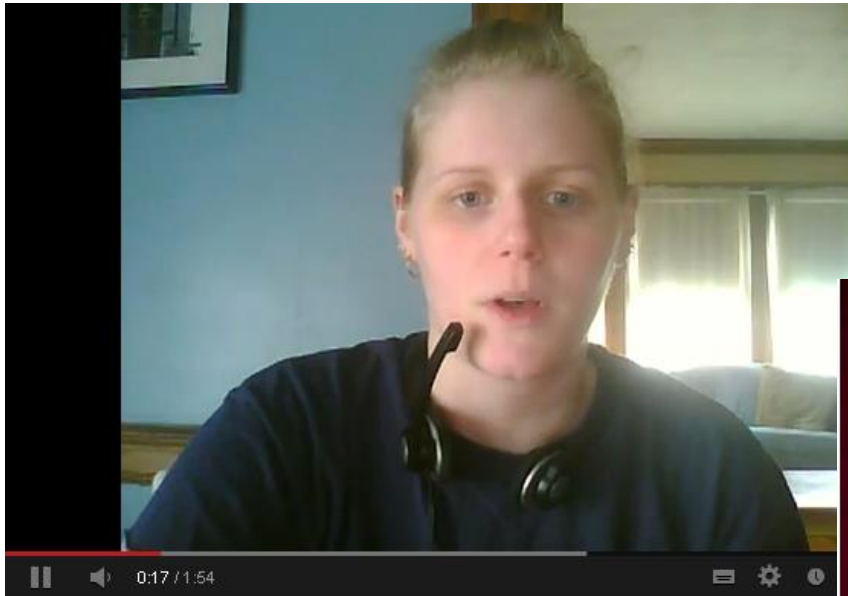
52.45 – Roger Bilham “earthquakes don’t kill people, buildings do”

54 -60 mins – ‘nowcasting’ rapid response warning system in California

# Moving to California?!

## PREDICTION

Predicting the big one is clearly on everyone's minds...



Psychic Prediction 2012- Big California Earthquake over 9.0 mag August, Sou



Jessica Caracciolo · 35 videos

 **Subscribe** < 218



Large! 6.4 EARTHQUAKE just strike CALIFORNIA Dec.14,2012: 7 Days after PREDIC...



HarvestArmy · 1,246 videos

 **Subscribe** < 3,463

396 views

 10  0

# Moving to California?!

## PREVENTION



**Newly opened stretch  
of the Oakland Bay  
Bridge**

VID:

<http://www.youtube.com/watch?v=WvAlivBaxso>

# Moving to California?!

**PREVENTION**

## One Rincon Hill

VID:

<http://www.youtube.com/watch?v=h3UVMHjv>

[FWs](#)



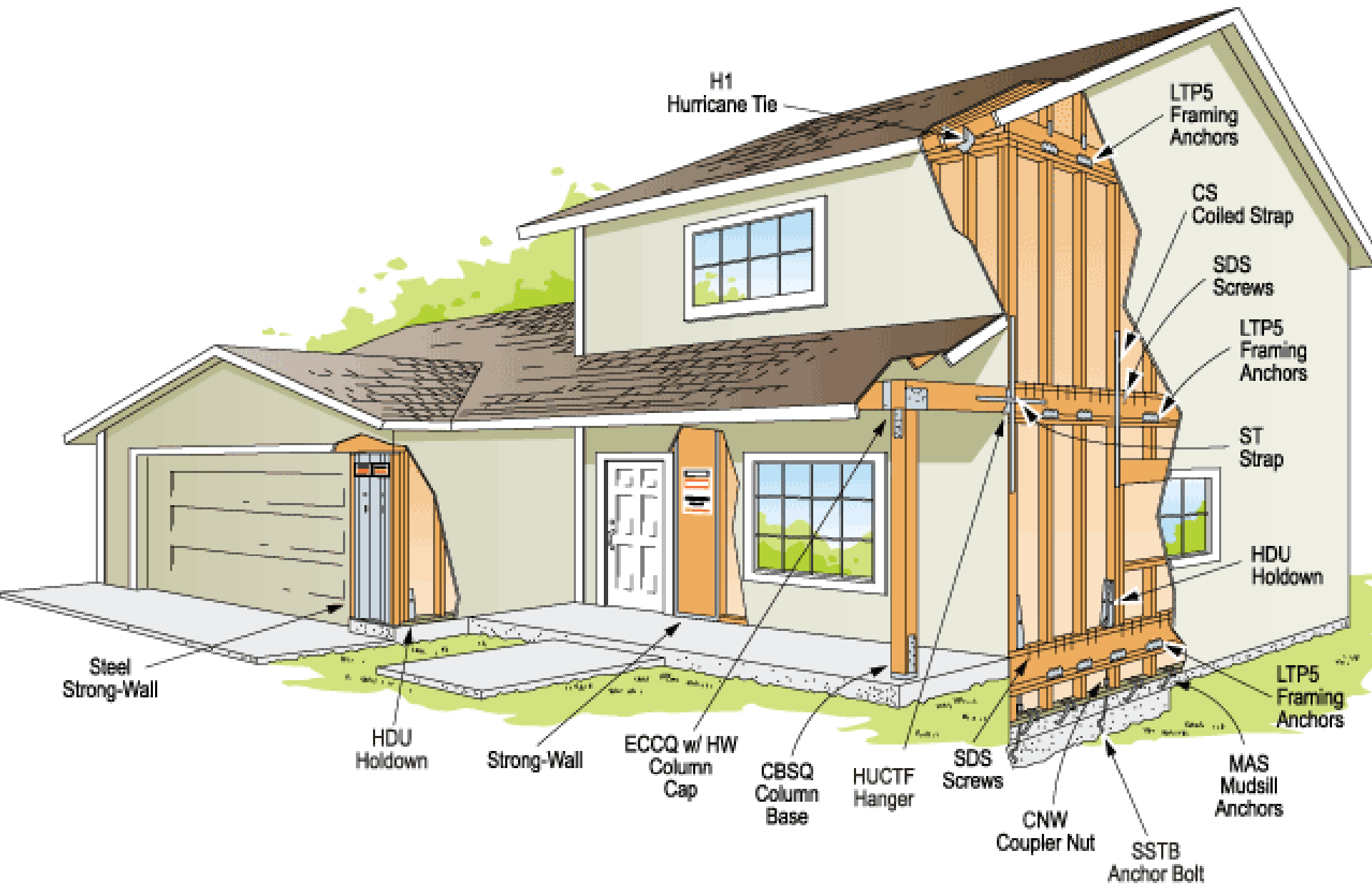
## Transamerica Pyramid



03.24.2008

# Moving to California?!

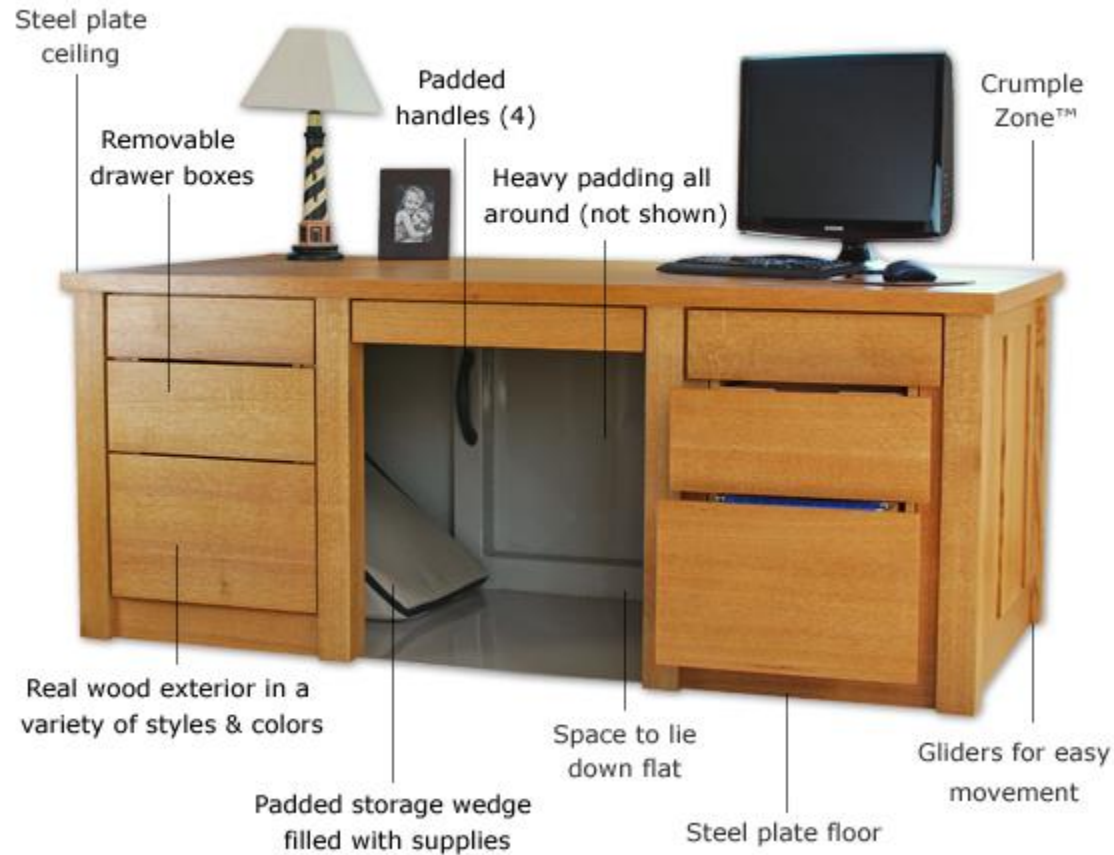
# PREVENTION



# Moving to California?!

**PREVENTION**

Structure tested to support over 1 Million Pounds



## Lifeguard earthquake proof desk

VID: <http://www.youtube.com/watch?v=GurQFRCqWEg>



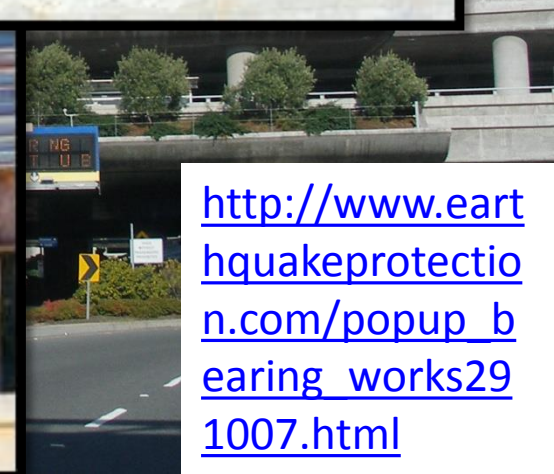
Researching earthquake proof buildings VID:  
<http://www.youtube.com/watch?v=loAtwiVpjev>

# Moving to California?!

## PREVENTION

### San Francisco airport

INFO: [http://www.earthquakeprotection.com/building\\_san\\_francisco\\_airport\\_terminal.html](http://www.earthquakeprotection.com/building_san_francisco_airport_terminal.html)



[http://www.earthquakeprotection.com/popup\\_bearing\\_works291007.html](http://www.earthquakeprotection.com/popup_bearing_works291007.html)