



*Natural Disasters:  
Lessons Learned*

*Catástrofes: Lecciones Aprendidas  
(terrorismo, terremotos e inundaciones)*

*Commissioner Adam Hamm  
North Dakota Insurance Department*

April 27, 2011

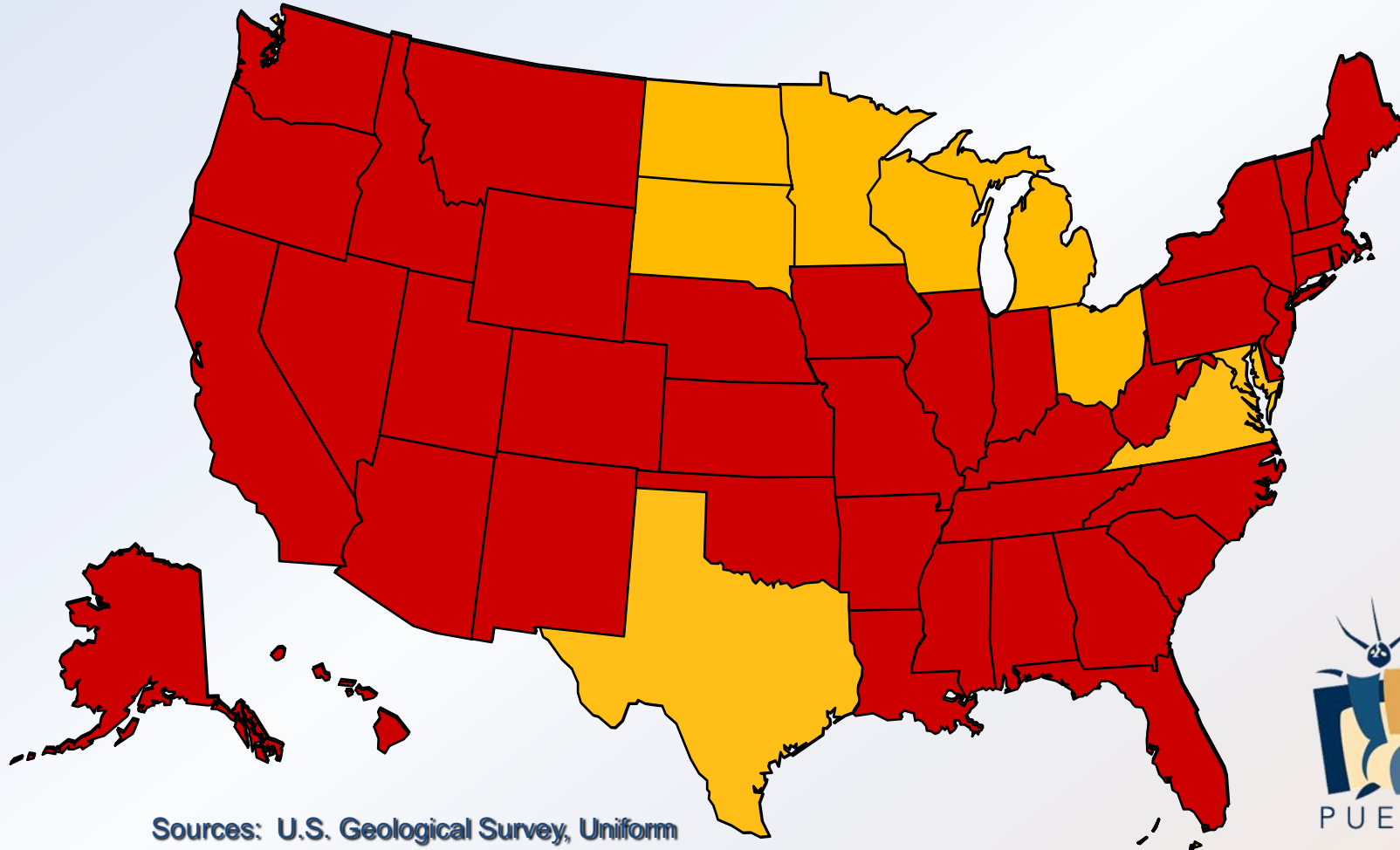
# Agenda

- U.S. exposures to natural disasters
- Floods and flood insurance
- Earthquakes and earthquake insurance
- Dealing with natural disasters



# States With Significant Risk of:

EARTHQUAKE



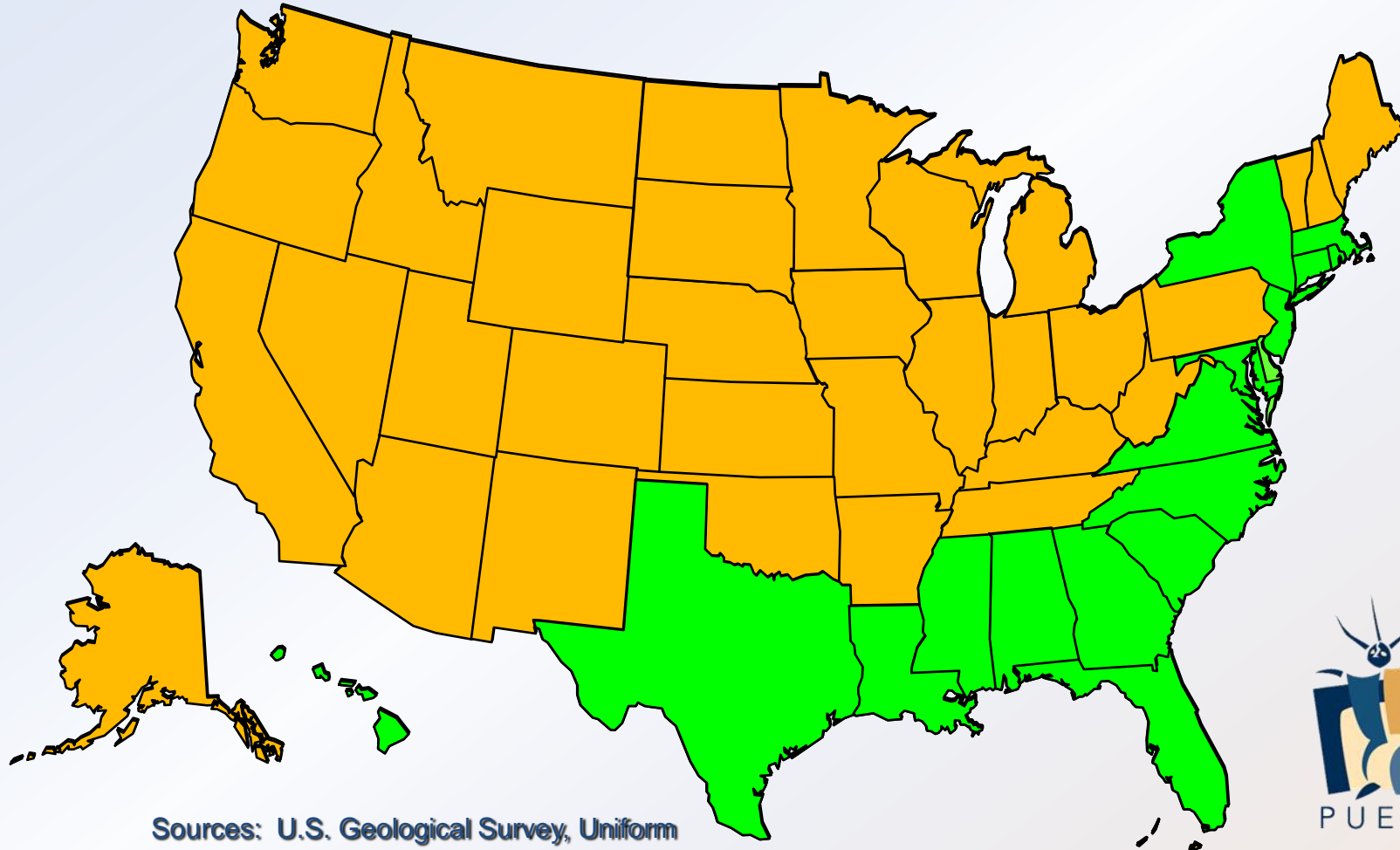
Sources: U.S. Geological Survey, Uniform Building Codes, Council of State Governments

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# States With Significant Risk of:

HURRICANE



Sources: U.S. Geological Survey, Uniform Building Codes, Council of State Governments

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# States With Significant Risk of:

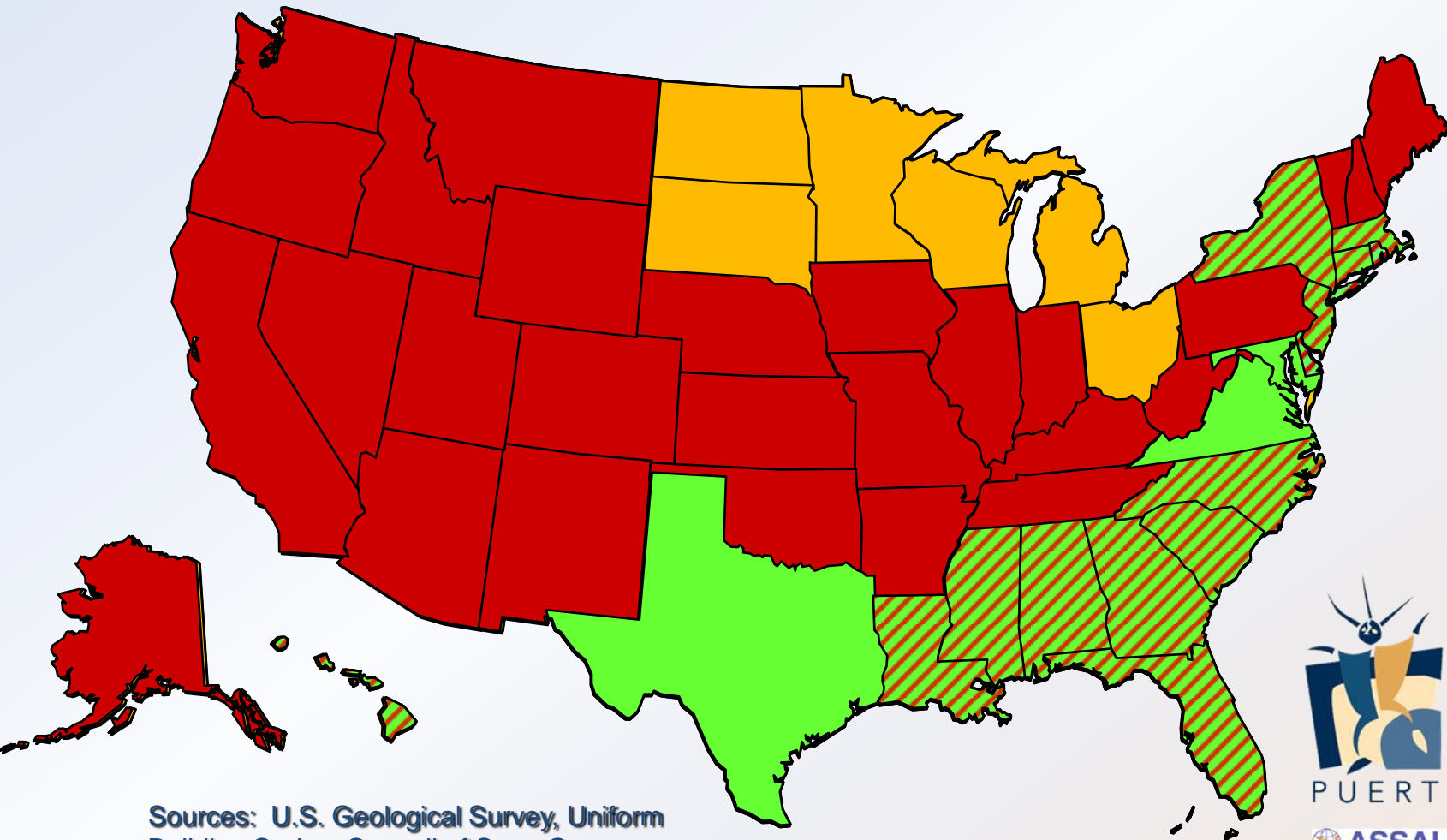
EARTHQUAKE



HURRICANE



BOTH



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# U.S. Exposures to Natural Disasters

- Earthquake – 41 states, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico and the U.S. Virgin Islands are exposed
- Hurricane (Typhoon)– 17 states, DC, American Samoa, Guam, the Northern Mariana Islands, Puerto Rico and the U.S. Virgin Islands are exposed
- Flooding – all 50 states , DC, American Samoa, Guam the Northern Mariana Islands, Puerto Rico and the U.S. Virgin Islands are exposed
- North Dakota is susceptible to flooding, hail, tornado and winter storms





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# Floods and Flood Insurance

- In the U.S. flood was a covered peril in property insurance policies until the 1960s
- Extensive flooding along the Mississippi River led insurers to limit the amount of flood insurance coverage available and cancel policies
- In 1968, the U.S. Congress created the National Flood Insurance Program (NFIP)





# Floods and Flood Insurance

- The NFIP offers flood insurance to homeowners, renters, and business owners
- To be eligible for coverage for its residents, a community must agree to participate in the NFIP
- Participating communities must agree to adopt and enforce laws to reduce the risk of flooding



# Flood and Flood Insurance

- Flood insurance coverage can be purchased directly from the NFIP or through 90 Write-Your-Own insurers
- The WYO insurers issue policies that are 100% reinsured by the NFIP
- People living in a Special Flood Hazard Area (SFHA) or high-risk area are required by law to buy flood insurance if they wish to secure a federally-backed mortgage



# Flood and Flood Insurance

- Average residential flood loss is \$33,000
- 30-day waiting period for coverage to start
- Residential policy limit is \$250,000 for real property
- Residential policy limit for contents is \$100,000—contents coverage sold separately
- Some private insurance sold above the National Flood Insurance Program limits









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# Earthquakes & Earthquake Insurance

- Generally not a covered peril in property insurance policies
- Offered by private insurers as an optional coverage
- California enacted legislation to establish the California Earthquake Authority
- In January 1994, a 6.7-magnitude earthquake struck California's San Fernando Valley
- Known as the Northridge Earthquake, it was the costliest earthquake in U.S. history
  - \$12.5 billion in 1994 dollars
  - About \$17.2 billion today
- It occurred on a previously undocumented fault



# Earthquakes & Earthquake Insurance

- Formation of the California Earthquake Authority
  - By January 1995 private insurers were refusing to write coverage for earthquake in California
  - Threatened the viability of the Housing market
  - In 1996, the California Legislature established the California Earthquake Authority
    - Publicly managed
    - Largely privately funded
  - Insurers must offer earthquake coverage or agree to sell California Earthquake Authority policies as a condition to selling residential property insurance in California





# Earthquakes & Earthquake Insurance

- Insurers that sell over 2/3 of the residential property insurance in California have chosen to become CEA participating companies
- The CEA is one of the largest providers of residential earthquake insurance in the world
- No similar mechanism exists in other states
- Only 12% of California residents are covered for the earthquake peril
- The percentage of the population covered for earthquake is believed to be even less in other states



# Dealing with Natural Disasters

- Education
- Mitigation
- Managing risk concentration
- Managing timing risk
- Reinsurance
- Need for a national or international backstop for the mega-catastrophe





Thanks!