

NEHRP Advisory Committee on Earthquake Hazards Reduction – FEMA Update

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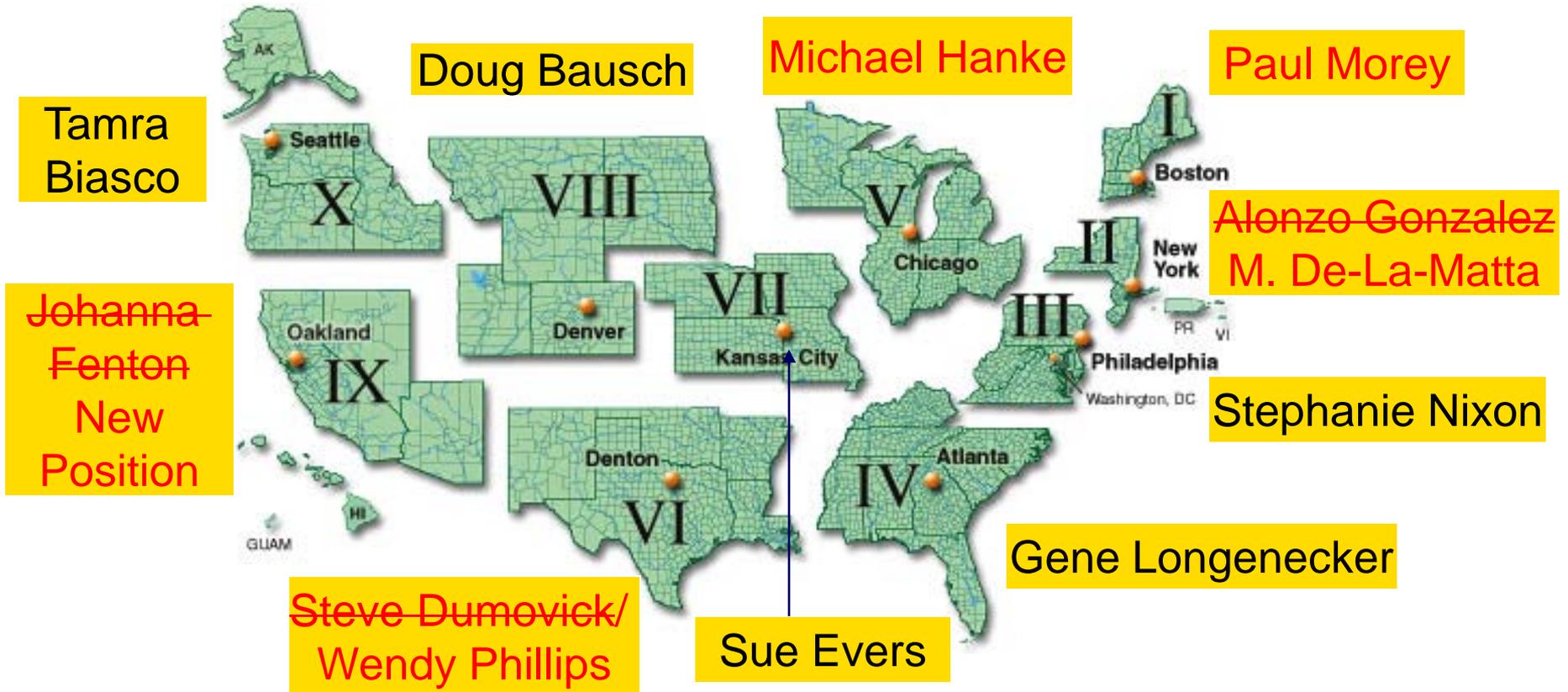
HQ Staff - There are more changes

- **Dr. Sandra Knight** – new Deputy Assistant Administrator for Mitigation
- **Cathleen Carlisle** – Going to Region II
- **Robert Franzen** – Management Analyst/NEHRP liaison
- **Larry Hultengren** – Retiring
- **Mike Mahoney** – Codes/Special Projects (PBSD, R Factors, Tsunami, etc)
- **Mai Tong** – New Buildings Guidance/Building Science
- **Paul Tertell** – Incremental Seismic Rehabilitation
- **Claudette Fetterman** – New State Assistance Program



The Team – There are more changes

Regional Earthquake Program Managers



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FEMA's Role in the NEHRP

- The program objectives and activities listed in the NEHRP Re-authorization translate into activities in the following areas: (listed from technical to implementation)
 - Guidance Development (new and existing)
 - Building Codes and Standards
 - Training (current, planned and future strategy)
 - Outreach (strategic communication)
 - State and Local Coordination (NETAP, EMPG, State Assistance)
 - Partnerships (consortia, EERI)
- State Regional Earthquake Program Staff have a critical role in meeting NEHRP mission and goals



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NEHRP Re-Authorization

- Passed house (H.R. 3820)
 - Lower Authorization numbers for FEMA (\$23.9M in FY 2009 to \$10.2M in FY 2010 for FEMA)
 - Increased focus on Multi-hazard
 - Similar – streamlined - list of activities for FEMA
- Awaiting Senate action



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Current Activities

Earthquake State Assistance Program

- Under Public Law 108-360, FEMA is directed to operate a program of assistance to States that accomplish various eligible earthquake mitigation activities.
- Other goals include establishment and or maintenance of dedicated State Earthquake Hazards Reduction Programs that achieve measurable improvements thru specific earthquake mitigation activities.
- In FY09, FEMA re-established dedicated EQ State Assistance Program which continues in FY10.



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Eligible Activities

- Develop seismic mitigation plans
- Prepare inventories and conduct seismic safety inspections of critical structures and lifelines
- Update building codes, zoning codes, and ordinances to enhance seismic safety
- Increase earthquake awareness and education
- Encourage the development of multi-State groups for such purposes



Qualification Criterion

- State Seismic Risks by Seismic Design Categories (SDC)
- States of high seismic risks (SDC D and up) in FY 2009 – 29 States and Territories received \$
- The new seismic risk map for the 2010 State EQ Program
- FY10 qualification based on the new risk maps



High and Very High Seismic Risks

	2009 State EQ Assistance Program				
	Very High Risk	High Risk	Moderate Risk	Some Risk	Low Risk
FEMA Region 1		VT, ME	MA, CT, NH	RI	
FEMA Region 2		NY, PR, VI	NJ		
FEMA Region 3			VA, WV	MD, DE, PA	
FEMA Region 4	KY, SC, TN	GA, MS, NC, AL			FL
FEMA Region 5	IL	IN		OH	MI, WI, MN
FEMA Region 6	AR	NM	OK, TX	LA	
FEMA Region 7	MO			NE, KS	IA
FEMA Region 8	MT, WY	UT	CO	ND, SD	
FEMA Region 9	CA, NV, HI	AZ, Guam			
FEMA Region 10	AK, OR	WA, ID			



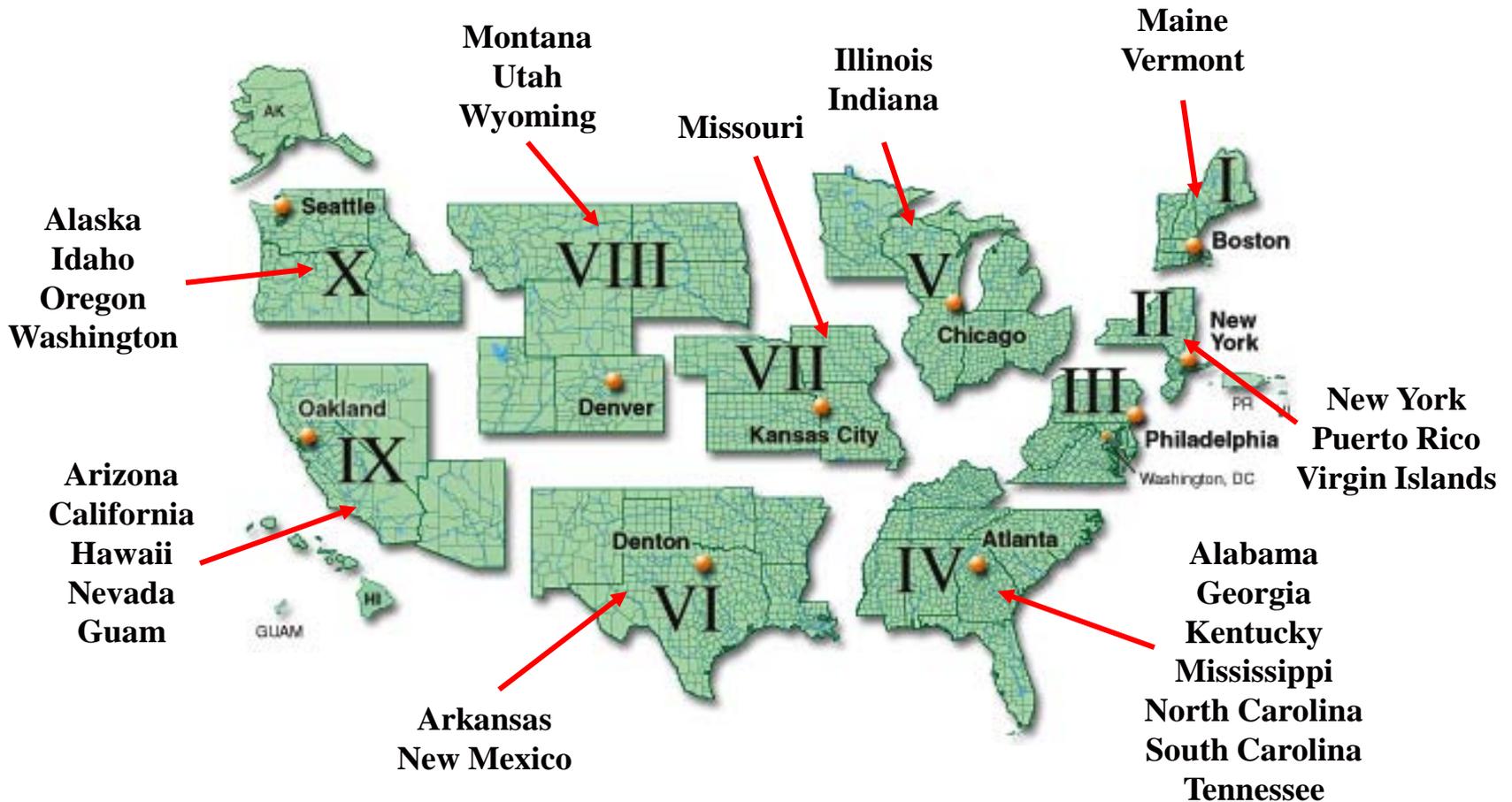
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FY 09 EQ State Assistance Program



Eligible States



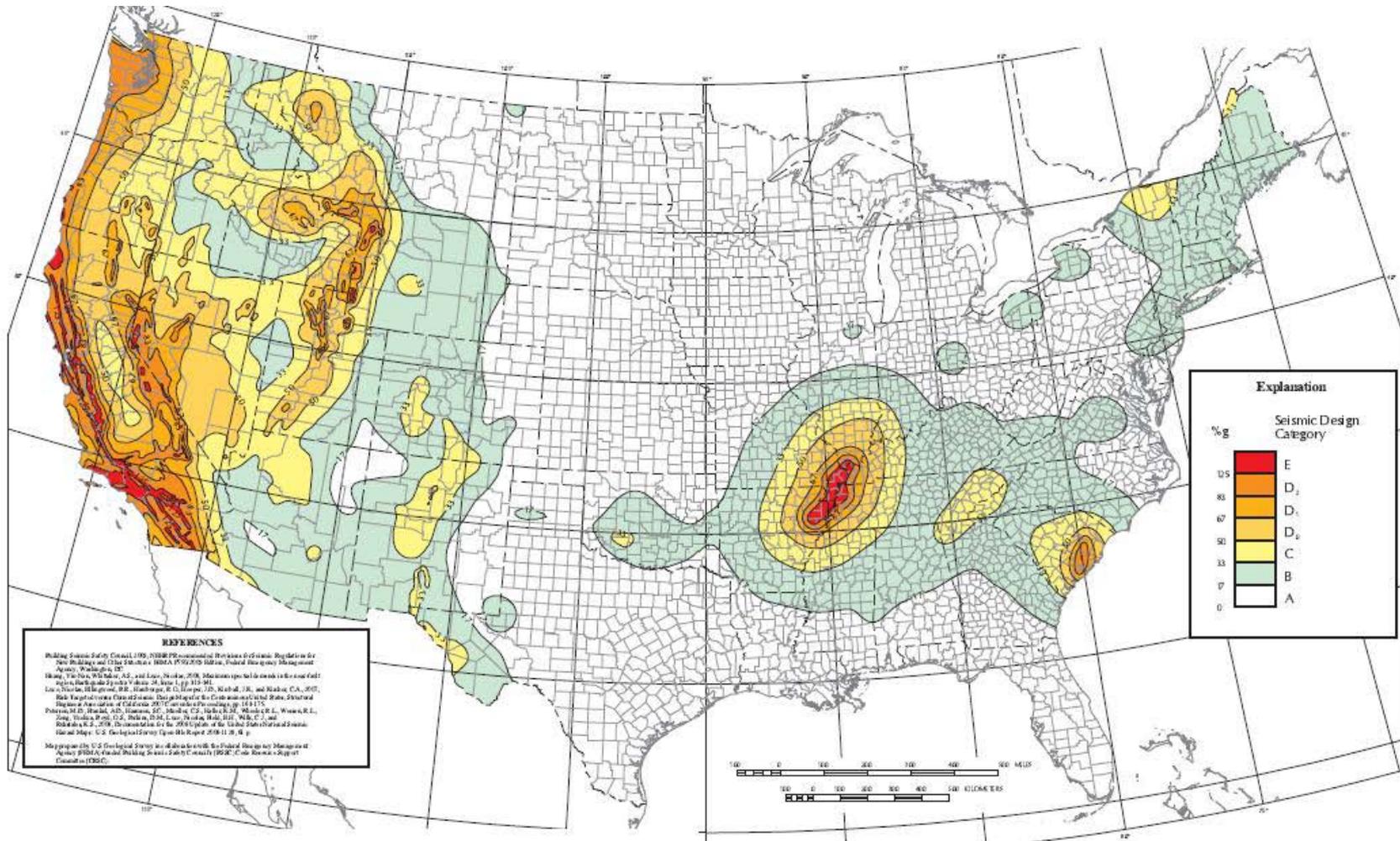
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The New Seismic Risk Map



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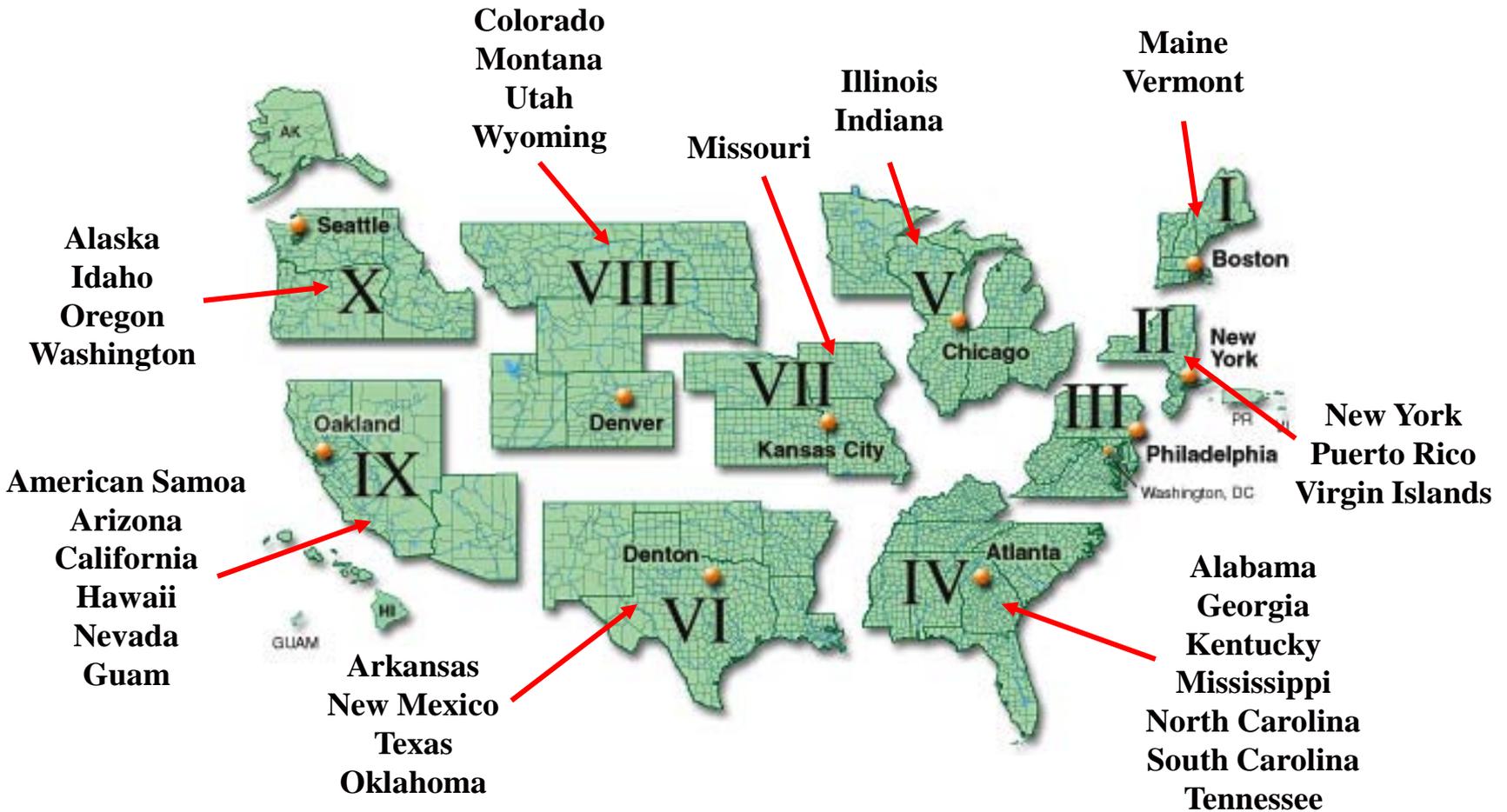


State Seismic Risks by the New Map

	2010 State EQ Assistance Program				
	Very High Risk SDC E	High Risk SDC D	Moderate Risk SDC C	Some Risk SDC B	Low Risk SDC A
FEMA Region 1			ME, VT	RI, MA, NH, CT	
FEMA Region 2		NY, PR, VI		NJ	
FEMA Region 3				VA, WV, MD, DE, PA	
FEMA Region 4	KY, TN	MS, SC	GA, NC, AL,		FL
FEMA Region 5	IL	IN		OH	MI, WI, MN
FEMA Region 6	AR	NM,	TX, OK	LA	
FEMA Region 7	MO			NE,	IA, KS
FEMA Region 8	WY	UT, MT	CO	ND, SD	
FEMA Region 9	CA, NV, HI	AZ, Guam, American Samoa			
FEMA Region 10	AK, OR	WA, ID			



FY 10 EQ State Assistance Program



Eligible States



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Allocation Criterion

- FY10 funds (target allocations) are proposed to be allocated among 33 eligible states
- Each state will receive a base level funding
- Remaining funding will be allocated based on each state's weighted exposure to the earthquake peril per FEMA P-366 (HAZUS MH Estimated Annualized Earthquake Losses for the United States)



Current Regional EQ Program Manager Activity

- **Region 1**
 - New Earthquake Program Manager
 - Vermont and Maine State assistance grants
 - Coordination with NESEC and Western Observatory
- **Region 2**
 - Vigilant Guard Exercise – New York
 - Soil and geological studies – New Jersey
- **Region 6**
 - NLE 11 IPC - Arkansas
- **Region 7**
 - Missouri Seismic Safety Commission *Strategic Plan for Earthquake Safety in Missouri*, December 2007
 - Missouri Earthquake Awareness Month
 - QuakeSmart Earthquake Outreach



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Current Regional EQ Program Manager Activity Cont...

- **Region 8**

- Hebgen 50 Year Anniversary
- NRCC Recommended Alert Levels
- HAZUS/ShakeMap Integration Pilots and automation
- Scenario Atlas-USGS Hazard Map Disaggregation
- Wasatch Front Catastrophic Planning

- **Region 9**

- Great California ShakeOut
- Loma Prieta Earthquake Commemorative Symposium
- NV HAZUS project
- American Samoa

- **Region 10**

- Alaska Seismic Safety Week for local emergency planners
- Completion of all school retrofits in 2010 in Kodiak, AK – WSSPC Award of Excellence in Mitigation for 2009



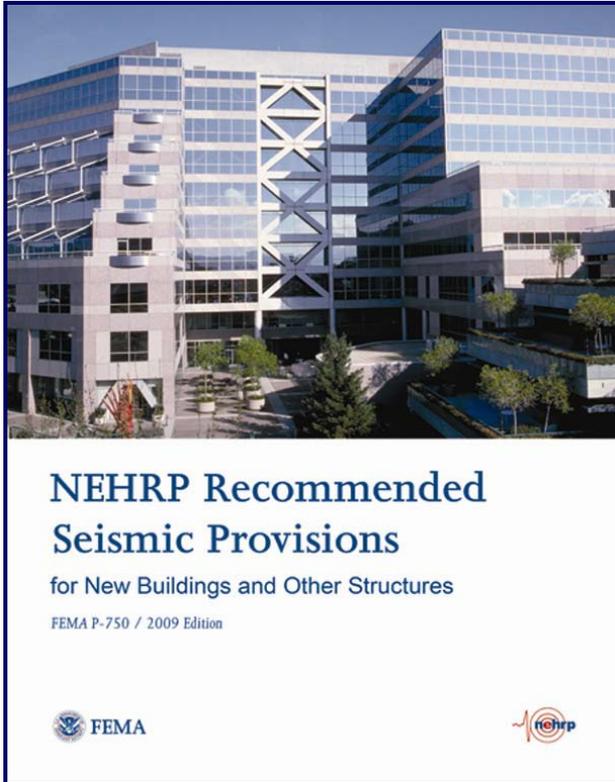
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2009 NEHRP Recommended Seismic Provisions for New Buildings and Other Structures



- New 2009 edition being published as FEMA P-750 – available on www.NEHRP.gov
- Primary resource for ASCE/SEI 7-10 and the national model building codes IBC and IRC 2012.
- Includes a series of supporting publications:
 - FEMA P-751 Nontechnical Introduction
 - FEMA P-752 Design Examples
 - FEMA P-752 Training Materials



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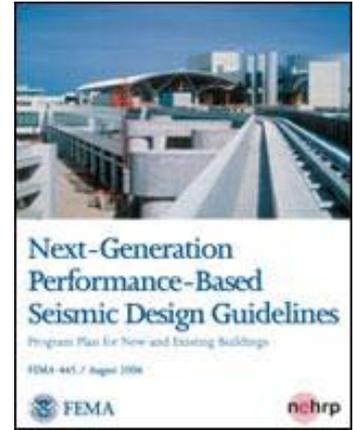
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Performance Based Design

- Goal of the project is to develop design and construction criteria that will allow an owner to determine performance of their building based on criteria they can understand:
 - Dollars Casualties Downtime
- Will allow for validation of code level prescriptive design.
- The first phase is to develop a Performance Assessment Methodology, which will include a software tool, PACT.
- Second phase will use the Phase 1 Methodology to develop Performance Based Seismic Design Guidelines.



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Residential Publications



Homebuilders' Guide to Earthquake Resistant Design and Construction

FEMA 232 - June 2006



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INTERNATIONAL CODE COUNCIL
People Making People
Make a Safer World™



Earthquake Safety Guide for Homeowners

FEMA 530 / September 2005



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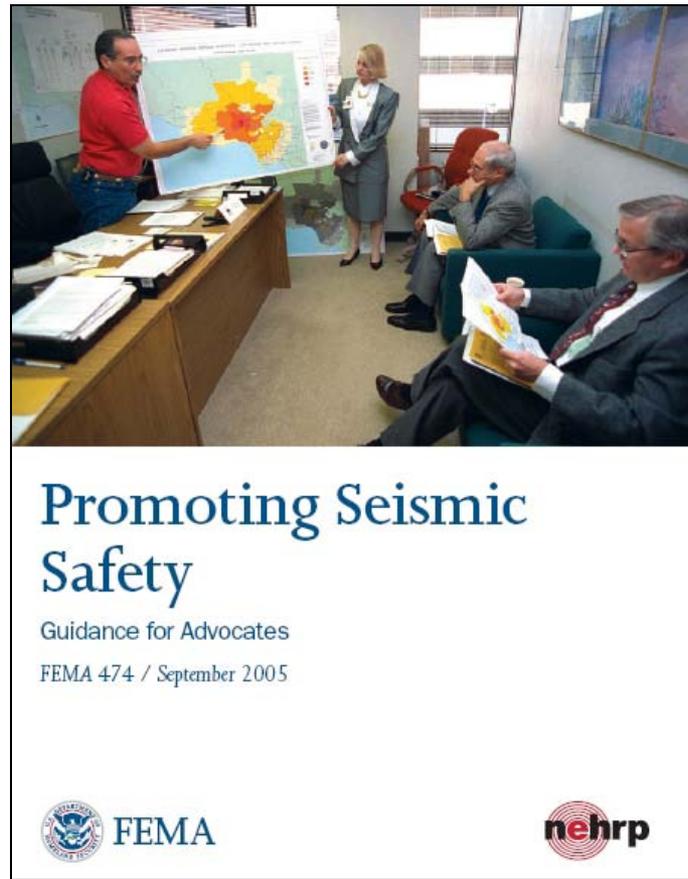
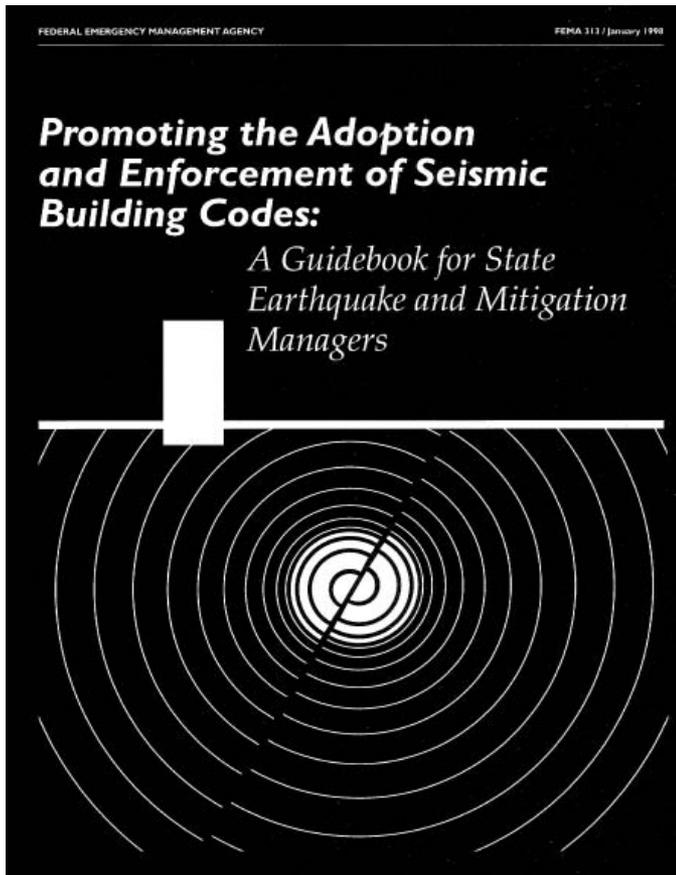
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Policy Publications



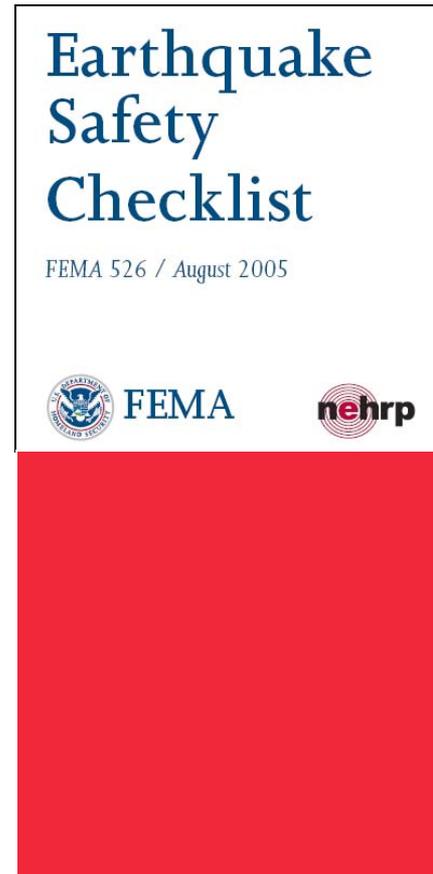
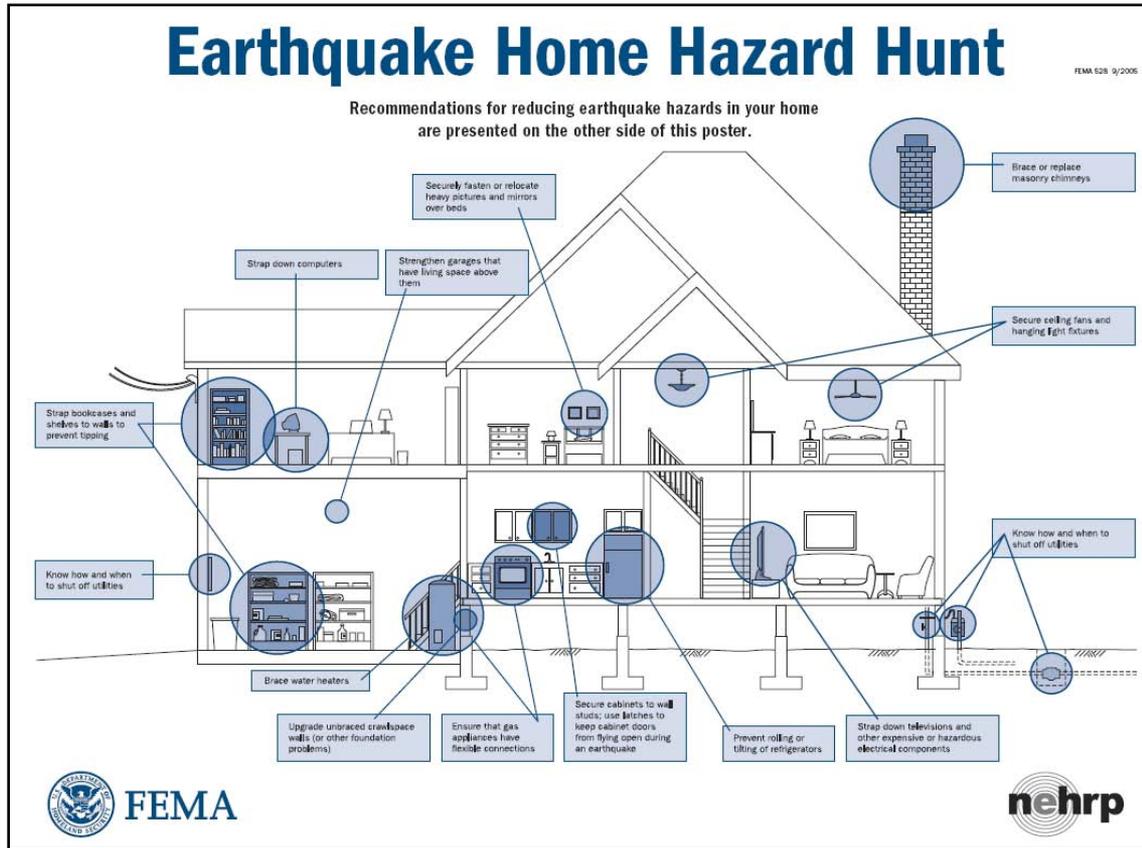
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Awareness Publications



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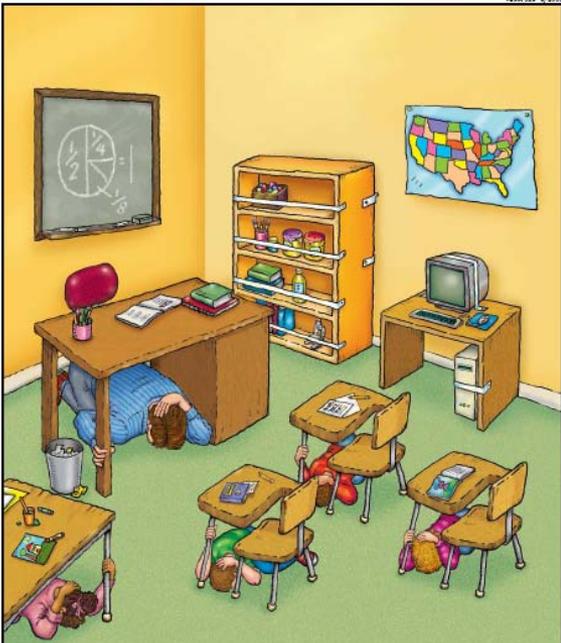
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FEMA Activity – Drop, Cover, and Hold

When earthquake shaking begins . . .
Drop, Cover, and Hold

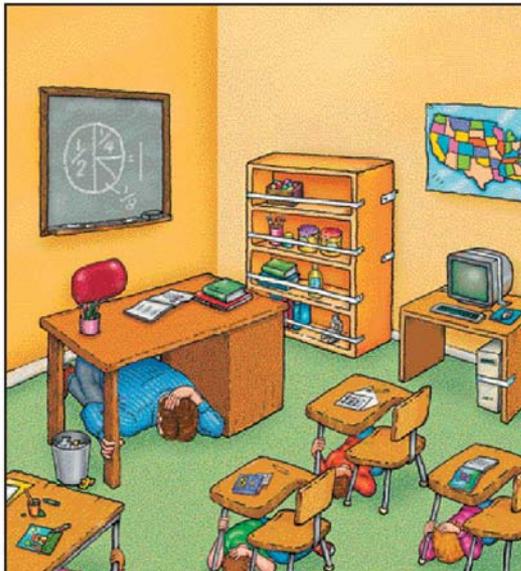


Take cover under a sturdy desk or table, hold on to the desk or table leg so that the desk or table stays on top of you, and keep your head down until the shaking stops.

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グラッと来たら……
物の下にもぐって、身を守る



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FEMA NEHRP Activity

- For the past several years, FEMA has been working on a hazard mitigation demonstration project to develop real time linkage between HAZUS and the USGS Shake Map.
 - Will allow for real time loss estimations based on actual ground motions produced automatically following an event
 - Seattle and Salt Lake City underway with a third city this year
- The goal of the project to have the capability to transfer methodologies, software, and hardware to other cities.



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The Role of Earthquake Mitigation after Disasters

- Earthquake mitigation can happen before, during and after the design and construction of buildings and infrastructure and it can happen before and after a disaster.
- Earthquake mitigation can add value after a disaster –
 - Hazard Mitigation field operations
 - Community education and outreach
 - Moving from mitigation plans to sound projects



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The Role of Earthquake Mitigation after Disasters

- Mitigation Assessment Team (MAT) collects important data and lessons learned after disasters
 - Collects perishable, post-earthquake, data on its' own and thru partners.
 - Identifies design practices, construction methods, and building materials that failed or performed well.
 - Lessons learned are provided to States, locals, designers and contractors.
 - Leads to improvements in Nation's building codes and standards.





Background



In early 2008, FEMA, working through the Applied Technology Council (ATC) entered into an agreement to create a multi-faceted information project (*QuakeSmart*) to disseminate earthquake mitigation practices and benefits to business located in at-risk communities.

The goal of *QuakeSmart* is to build awareness within the business community of the risk and to educate businesses on things they can do to mitigate the impact of earthquakes.

Not only can business owners protect their investments and recover more quickly from a disaster, they can save on insurance premiums, significantly reduce the risk of injury or death for themselves, their employees, and customers, and create a more resilient community in which future investment is more attractive.

Know your risk, make a plan, and take action is the matra of this program.



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- FEMA Press Releases
- Newspaper Ads
- Save The Date Invitations
- Local Newspaper articles
- Local Televised Public Service Announcement Airings
- Contact with Local Media at Forum Locations
- Public Service Announcement





QuakeSmart Website



www.quakesmart.org

A “general store” of earthquake mitigation information and resources. Includes information ranging from knowing your risks to the fundamentals of making a Risk Reduction Plan. In addition, it provides links to a wealth of information provided by other programs and agencies that can help businesses develop and institutionalize mitigation strategies and preparedness plans.



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- Developing corporate partnerships
- Maintaining existing relationships



Many ways to access our information

- www.fema.gov/hazards/earthquakeindex.shtm
- www.quakesmart.org
- <http://www.fema.gov/plan/prevent/earthquake/publications.shtm>
- <http://www.fema.gov/plan/prevent/earthquake/state.shtm>
- <http://www.fema.gov/plan/prevent/earthquake/links.shtm>
- Other Useful Sites
 - <http://www.fema.gov/rebuild/buildingscience/>
 - http://www.fema.gov/rebuild/smart_strong.shtm
 - http://books.google.com/books?q=FEMA&num=10&btnG=Google+Search&as_epq=&as_oq=&as_eq=&as_brr=0&as_pt=ALLTYPES&lr=&as_vt=&as_auth=FEMA&as_pub=&as_sub=&as_drrb_is=q&as_minm_is=0&as_miny_is=&as_maxm_is=0&as_maxy_is=&as_isbn=&as_issn=
 - www.atcouncil.org
 - www.bssconline.orghttp://www.fema.gov/plan/prevent/earthquake/nehrrp.shtm



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