

FEMA Update – ACEHR Committee Meeting November 2010

**Edward Laatsch, P.E.
Federal Insurance and
Mitigation Administration
Risk Reduction Division
Building Science Branch**



FEMA



How We See Ourselves

Building Science *for Disaster-Resilient Communities*



Mitigation
Works

FY 2010 Accomplishments

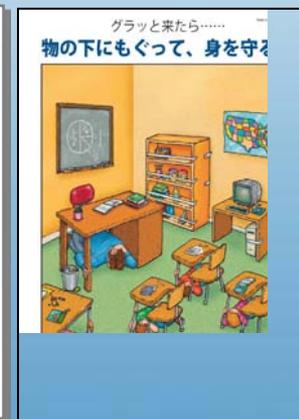
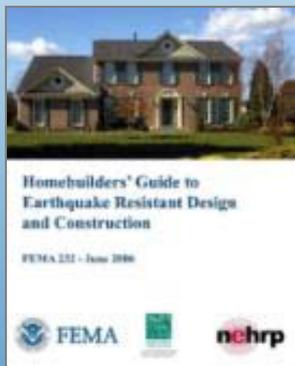
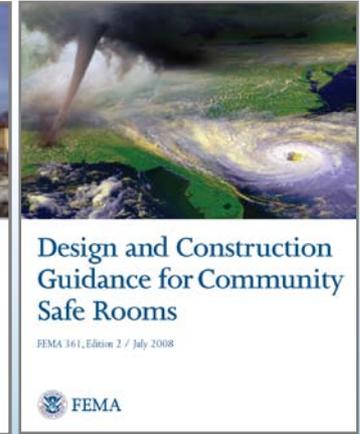
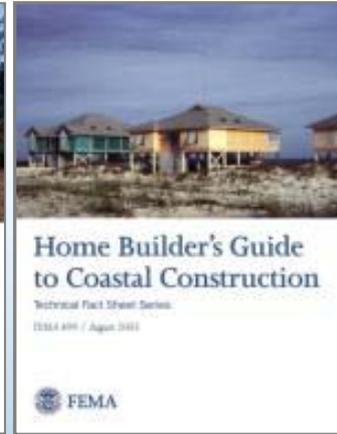
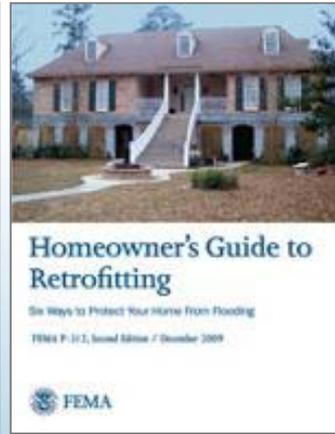
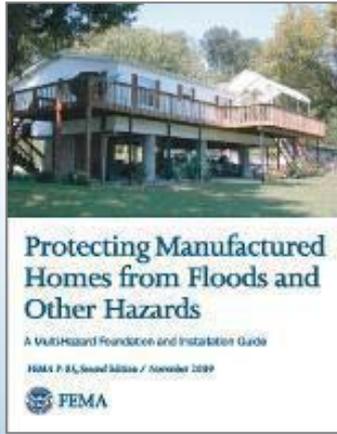
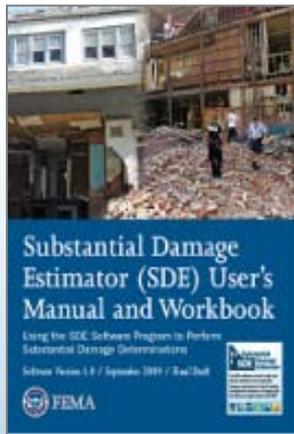
- Guidance and Tools Development
- Training
- Buildings Codes and Standards
- Implementation/Outreach
- Staff and Budget
- FY 2011 Priorities

Historical Accomplishments

1. NEHRP Recommended Provisions
2. Nation's disaster-resistant building codes
3. Technical services bureau for Mitigation and FEMA
4. Over 300,000 documents distributed annually
5. 9 guide books completed or revised and over 2,200 people trained in FY 2010



Guidance & Tools Development



ROVER Partnership

- Rapid Observation of Vulnerability and Estimation of Risk Partnership with Utah
- Partnered with State of Utah on a building assessment pilot project targeting a representative sampling of eighty (80) public and charter schools to analyze their risks and support the planning and implementation of future earthquake risk reduction activities. The pilot project screened about 10% of the public schools in the Wasach Front. It is intended to lead the way for developing a complete inventory of vulnerable school buildings in the area.
- FEMA, under the National Earthquake Hazards Reduction Program (NEHRP), provided cooperative agreement funding, training support, and technical assistance to Utah to plan and execute the pilot project. Twenty local engineers volunteered and participated the project from Sept 13-15, 2010.

ROVER Partnership

- Used *FEMA 154 Rapid Visual Screening of Buildings for Potential Earthquake Damage*, a nationally accepted standard procedure for rapid assessment so local communities can understand their vulnerabilities in their existing building stock. During the process, Utah volunteers also tested and utilized FEMA's Rapid Observation of Vulnerability and Estimation of Risk (ROVER) tool to digitize its data collection and building assessment inventory.
- Essentially, the pilot project will enable Utah to identify which schools need further engineering evaluation and future seismic retrofitting to ensure the safety of staff and students should an earthquake occur. This would also set a model that Utah could employ towards a more comprehensive building assessment project that would include other State-owned critical facilities.

FEMA P-798, Natural Hazards & Sustainability for Residential Buildings

- Examines current green building rating systems in a broader context
- Identifies green building practices — the tools of today's green building rating systems — that are different from historical residential building practices and that have the potential to compromise a building's resistance to natural hazard events.
- Discusses how to retain or improve natural hazard resistance while incorporating these green building practices. While most common green building practices provide sustainability advantages with little or no effect on structural performance or durability, others require reevaluation of the building's structural design or detailing to retain its integrity during natural hazard events. Often, only minimal design modifications are required to maintain natural hazard resistance.

FEMA P-593 and FEMA P-767 Rehab Training

- Under National Earthquake Technical Assistance Program (NETAP), conducted multiple training courses through the United States. New courses based on two slide packages available on CD.
- FEMA P-593 includes training modules on the Seismic Rehabilitation of One and Two Family Dwellings and key concepts for prioritizing earthquake vulnerabilities to existing wood-frame houses.
- FEMA P-767, Earthquake Mitigation for Hospitals Workshop, includes an overview of earthquake risks to buildings and non-structural elements with a focus on hospital and healthcare facilities.
- Additional courses were also held on FEMA 154, Rapid Visual Screening of Buildings for Potential Seismic Hazards.

FEMA P-593 Seismic Rehab Training For one and Two Family Dwellings

- Released in January 2010 as FEMA P-593.
- CD only product contains PowerPoint slide presentations, Instructional Guide and speaker's notes for training of contractors, code officials and other interested parties in the seismic retrofitting of existing light frame dwellings.
- Product has since been used by the International Code Council as the basis for a series of webinars that have been presented to their membership.

Building Codes & Standards

Nation's disaster resistant building codes are a Cornerstone of effective mitigation

Administrator Fugate understands the importance of strong codes “... make sure we don't add to existing risk by continuing to build in hazardous areas or constructing new development to inadequate/unenforced codes...”

Mitigation has an MOU with the International Code Council

Every year the number of jurisdictions in hazard-prone regions that have disaster resistant codes grows (based on ISO BCEGS data. (Dec 2010 – 5,901 of 14,785 high-hazard jurisdictions was a 20% increase over 2008)



FY 2010 Building Codes

- International Code Council Code Change Hearings and Final Action Hearings for the *International Building Code*, *International Existing Building Code* and *International Residential Code*.
- Under Code Resource Support Committee, attended and provided testimony on several proposed code changes for the 2012 edition of these model codes successful 21 of 24 times.

FY 2010 Building Codes

- Submitted and defended important changes including:
 - Approval of the new seismic design maps for the IBC and IRC developed under the 2009 *NEHRP Recommended Seismic Provisions* (FEMA P-750) adopted by ASCE/SEI 7-10 (S97)
 - Approval of the new seismic design maps for the IBC and IRC developed under the 2009 *NEHRP Recommended Seismic Provisions* (FEMA P-750) and adopted by ASCE/SEI 7-10 (S97)
 - Improved special inspection requirements for steel frame construction, most of which were originally developed under the FEMA/SAC Steel Moment Frame Guidelines Project after the Northridge earthquake and published by FEMA in FEMA-353 (S121)
 - Improved IRC provisions for braced wall systems (RB 105 and 106)
 - Provided testimony on 24 propose code changes, both in support of changes we were in favor of as well as in opposition of changes that weakened the seismic provisions of the code.

Collaborating with Other Organizations



Implementation & Outreach

Enhanced Awareness through:

- *Partner Development*
 - *Documents, CD's, e-documents*
 - *Training*
 - *Presentations, Papers and Articles*
 - *Website and eMail Updates*
 - *Demonstration Projects*
 - *EQ State Assistance*
- 2,277 trained and completed 9 publications – FY 09
 - Distribute 300,000 guides, CD's, and other materials annually
 - Tens of thousands of downloads annually
 - Maintain over 200 separate titles



State Earthquake Assistance

- Re-established a program of State assistance with 33 States and Territories in areas of high-seismic risk.
- \$2,300,000 annual effort supports the strengthening, enhancement, and maintenance of State earthquake hazard reduction programs. Through this support, we are improving State earthquake programs which will reduce the loss of life and property from damaging earthquakes.
- Eligible activities include: 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; and encourage the development of multi-State groups.
- Other goals include establishment and or maintenance of a dedicated State Earthquake Hazards Reduction Program and achieving measurable improvements in earthquake mitigation activities.

Quake Smart initiative continues

- QuakeSmart is a private-sector partnership initiative that aims in increasing activities related to earthquake mitigation by training and working with business managers and employees how to identify seismic risks, make a plan, and take mitigation actions at their facilities, their homes, and their communities.

Quake Smart initiative continues

- Conducted awareness activities and identified regional and national partnership opportunities for high-seismic risk businesses.
- Partnered with Service Master as part of Preparedness Month.
- Working with Home Depot on Saturday in store disaster instruction.
- FEMA NEHRP, ATC, & PRC staffs are working to solidify activities with companies like *Home Depot and ServiceMaster*.

Who We Are -Building Science HQ

Edward Laatsch, P.E. – Branch
Chief

Vice Hultengren – Guidance
Development/Code Adoption
Tracking

Wendy Phillips –
Consortia/Implementation &
Outreach

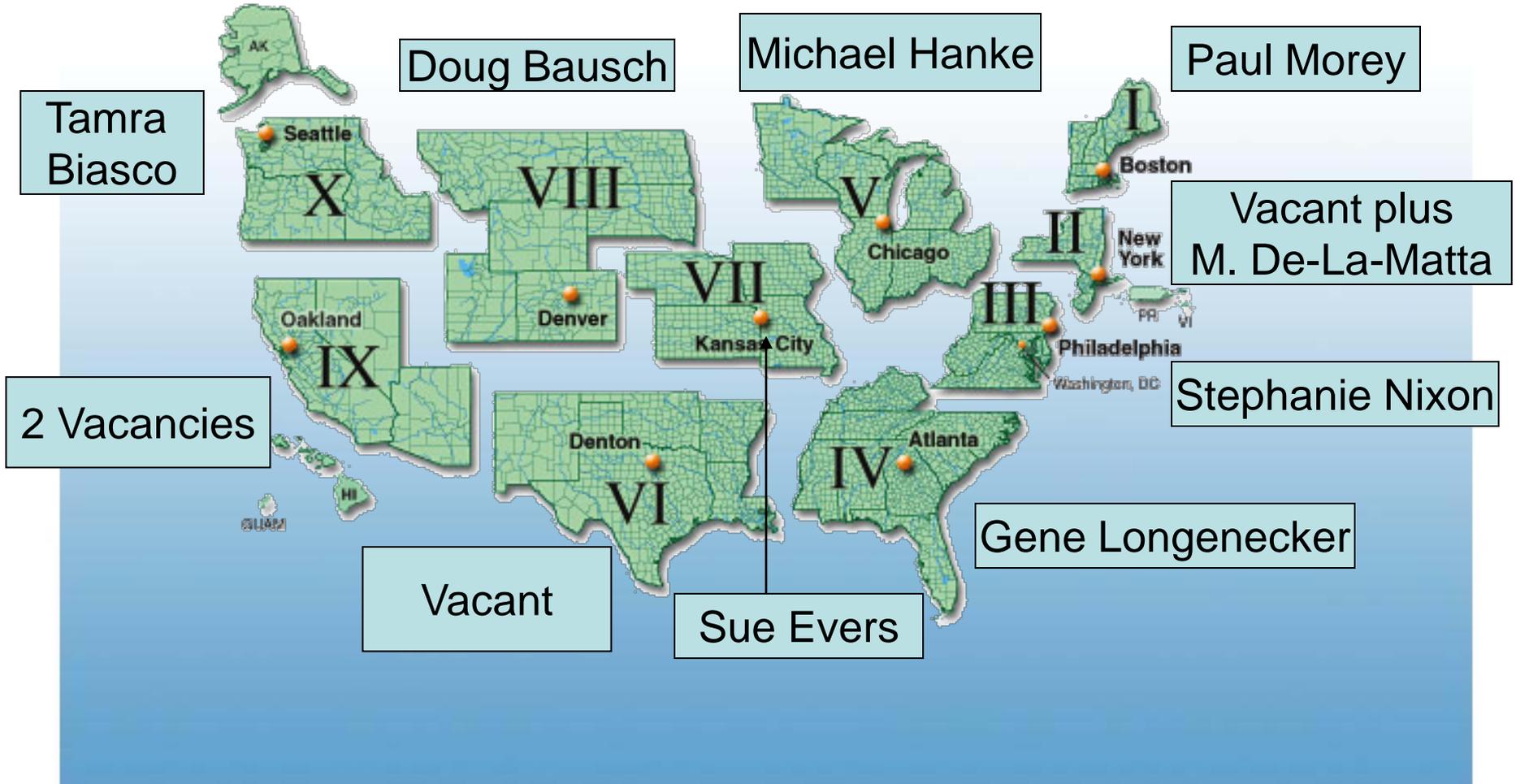
Mike Mahoney – Codes/Special
Projects (PBSD, R Factors,
Tsunami, etc)

Vice Franzen – Management
Analyst/Consortia

Mai Tong – EQ New Buildings
Guidance/Building Science

Claudette Fetterman – EQ State
Assistance/NETAP/Implement
ation

Who We Are - Regional EQ Program Managers



Budget

- \$10,213 M identified in FY 2011 DHS Appropriations Report
- \$8.977M in program funding – same as FY 2010
- Remaining funds support Salaries and Benefits – called out specifically in FY 2011

FY 2011 Priorities

- Continue emphasis on program implementation and outreach with targeted staff focus (Fetterman and Phillips)
- Consolidate outreach/implementation contracts to improve focus and reduce overlap
- Enhance involvement and visibility of regional EQ Program Managers
- Systematically review/evaluate current publications inventory



FEMA

www.fema.gov