

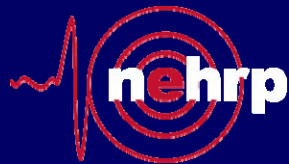
National Earthquake Hazards Reduction Program

... a research and implementation partnership

Strategic Plan 2008 – 2012

Overview for Advisory Committee on Earthquake Hazard Reduction

23 October 2007



FEMA

NIST
National Institute of
Standards and Technology

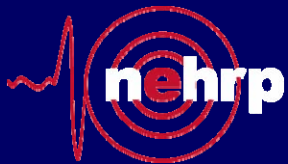


USGS
science for a changing world

national **earthquake** hazards reduction program

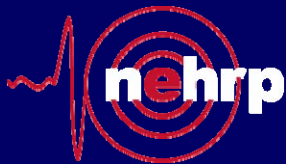
Presentation Overview

- Document Outline
- Schedule for Document Completion



Strategic Plan Outline

- Executive Summary
- Introduction
 - Vision / Mission / Strategic Goals Overview
 - Background
 - Program Development
 - Strategic Planning Principles
- Strategic Goals and Interrelationships
- Summary and Conclusions
- Appendices

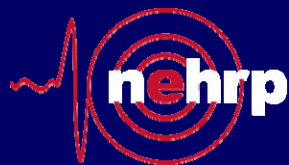


National Vision Statement

The Program is driven by a National vision for the future:

*A Nation that is earthquake-resilient
in public safety, economic strength, and national security.*

This vision gives rise to the NEHRP Mission Statement (see next slide).



national **earthquake** hazards reduction program

NEHRP Mission Statement

To work in multi-disciplinary interagency partnerships with end users to create an earthquake-resilient Nation by developing and implementing risk reduction knowledge, tools, and practices that enhance public safety, economic strength and national security.

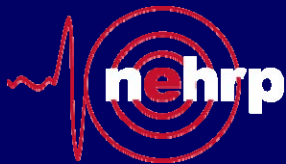


national **earthquake** hazards reduction program

Strategic Goals

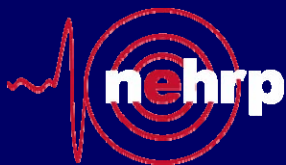
- A. Expand fundamental understanding of earthquake phenomena, processes, and impacts.
- B. Develop cost-effective measures to reduce earthquake impacts on individuals, the built environment, and society at large.
- C. Improve the earthquake resilience of our communities.

Goals closely parallel three major statutory program activities.



Background

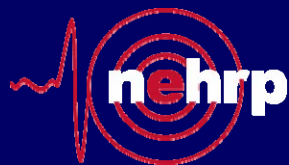
- Brief history – but most history and organization will be in appendices
 - Short overview explaining nature of problem, current approaches and their shortcomings, new technical ideas, and agency capabilities and statutory activities
- Listing of major program advances / outcomes / impacts
 - For example: adoption of NEHRP recommended provisions in national model building codes, benefits of advanced instrumentation for earthquake notification/early warning, new technical solutions (base isolation, improved steel moment frames)



Program Development

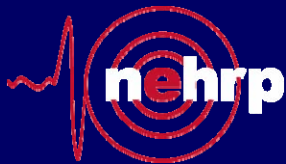
Describes 2006 ICC examination of “gaps” & emphasizes the 8 new thrust areas that were endorsed by ICC to receive high priority:

- Develop & implement advanced risk mitigation technologies & practices
- Facilitate improved earthquake mitigation at state & local levels
- Fully implement Advanced National Seismic System (ANSS)
- Refine techniques for evaluating & rehabilitating existing buildings
- Further develop Performance-Based Seismic Engineering (PBSE)
- Develop & conduct earthquake scenarios for key urban areas
- Develop a Post-Earthquake Information Management System (PIMS)
- Incorporate socio-economic issues in developing risk mitigation initiatives



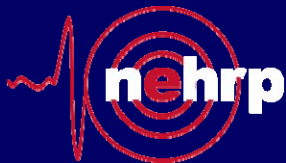
Strategic Planning Principles

- Program impact through effective development and transfer of knowledge, tools, and practices
- Evolutionary approach
- Interagency coordination / cooperation / synergy
 - Includes coordinated budget development
 - Emphasizes that progress towards all Plan goals and objectives presented in this Plan will be made, but not all of the outcomes will be fully realized during the Plan period of 2008 – 2012
- Close partnerships with stakeholder communities



Strategic Planning Principles (cont'd)

- Exploitation of ANSS, GSN, NEES
 - Includes emphasis on facility utilization by program
 - Includes recurring support for operating key research and data collection facilities (e.g. ANSS, NEES), providing the necessary foundation for achieving Plan goals and objectives
- Multi-disciplinary approach
- Multi-hazard leveraging awareness
- Linkages with broader Federal policies, plans, and priorities
- Increased international cooperation

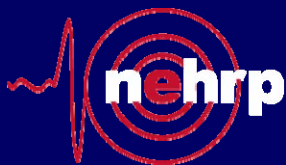


Strategic Plan Structure

- NEHRP goals: broad and long-term with expected impacts, that should be realized, in full or in part, during the five year planning period; serve to guide and focus NEHRP planning and activities to accomplish the NEHRP Mission.
- NEHRP objectives: specific achievements towards broad goals, with expected outputs and outcomes, that should be realized, in full or in part, during the five year planning period.

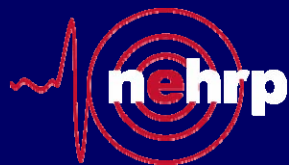
Note:

1. Fulfilling many of the objectives will contribute to more than one goal. Objectives are listed under the goal to which they principally contribute.
2. Statute also requires an Implementation Plan, which will contain more agency-specific data. That plan will be developed following Strategic Plan completion.



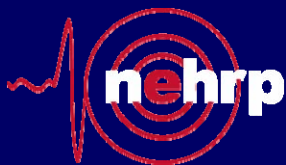
Goal A: Expand fundamental understanding of earthquake phenomena, processes, and impacts

- Objective 1: Advance fundamental understanding of **earthquake processes**
- Objective 2: Advance fundamental knowledge of **earthquake effects** on buildings, geostructures, lifelines, other structural systems, and urban regions
- Objective 3: Advance fundamental knowledge of **social, economic, and policy factors** associated with risk avoidance and mitigation implementation
- Objective 4: Develop and maintain a **Post-Earthquake Information Management System** (PIMS) for systematically collecting and managing data on the geological, engineering, social, and economic impacts of earthquakes



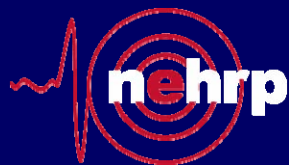
Goal B: Develop cost-effective measures to reduce earthquake impacts on individuals, the built environment, and society at large.

- Objective 5: Improve earthquake **hazards assessments** for research and practical applications
- Objective 6: Develop and apply knowledge of **socio-economic factors** that impact implementation of mitigation actions
- Objective 7: Improve design and construction practices for **buildings, geostructures, and other structures**
- Objective 8: Improve design and construction practices for **infrastructure lifeline systems and critical facilities**
- Objective 9: Develop cost-effective earthquake **risk reduction measures** for engineering practice



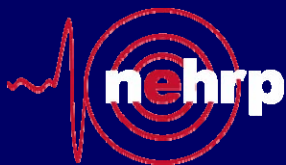
Goal C: Improve the earthquake resilience of our communities

- Objective 10: Improve the accuracy, timeliness, and content of **earthquake notifications**, rapid impact statements, and other information products
- Objective 11: Develop realistic **earthquake scenarios** and risk assessments for at-risk areas and populations
- Objective 12: Provide systematic support for the **seismic standards and code development processes**



Goal C: Improve the earthquake resilience of our communities (cont'd)

- Objective 13: Facilitate **knowledge transfer** among researchers, codes and standards organizations, state and local governments, risk managers, private sector professionals, and the public-at-large
- Objective 14: **Promote federal, state, and local government practices and policies** that reduce risk in the public and private sectors
- Objective 15: Increase **public awareness** of earthquake risks, develop the Nation's **human resource base** in the earthquake safety field, and support **earthquake education** at the K-12, collegiate, and professional levels



Summary and Conclusions

- General “wrap-up”
- Emphasize conducting series of forward-looking workshops for future “revolutionary” program redirections (e.g., use of LIDAR)



Appendices

- Abbreviations / acronyms
- Lexicon
- References
- NEHRP today (brief program description)
- Amplifying tables: goal-objective relationships, objective ties to agency statutory program activities

Note: Some of the appendix information may be moved to a separate supplement to the Plan



Proposed Plan Development Schedule

(All dates on or about)

- 05 October: ICC approves this outline for release to ACEHR members to review as individual subject matter experts, or directs changes to outline
- 23 October: PCWG briefs this outline to ACEHR members in open public forum & ACEHR provides feedback for consideration in draft Plan
- 9 November: PCWG forwards draft Plan consistent with ICC-approved outline to ACEHR members for subject matter expert review



Proposed Plan Development Schedule

(All dates on or about)

- 23 November: ACEHR members submit review comments to PCWG
- 5 December: PCWG submits revised draft Plan to ICC for informal interagency review (ICC plus OTP and agency OMB examiners) and clearance for public comment period
- 21 December: ICC clears public release of draft Plan for public comment (tentative ICC meeting in 5-21 December time period)
- 31 January: Public comment period ends
- 15 February: PCWG submits final draft for formal approval to ICC and interagency clearance by OMB
- 15 March: ICC releases final plan to public

