



National Earthquake Hazards Reduction Program (NEHRP) Reauthorization Act of 2018

*ACEHR Meeting
Boulder, CO
April 30 – May 1, 2019*

Jay Harris
Acting NEHRP Deputy Director

Engineering Laboratory
National Institute of Standards and Technology
U.S. Department of Commerce

Presentation Outline

- NEHRP Introduction / history
- Changes to Earthquake Hazards Reduction Act of 1977* from the NEHRP Reauthorization Act of 2018
- Discussions / Questions

* as amended through P.L. 108-360 (2004)



National Earthquake Hazards Reduction Program

A Statutory Multi-Agency Partnership



FEMA

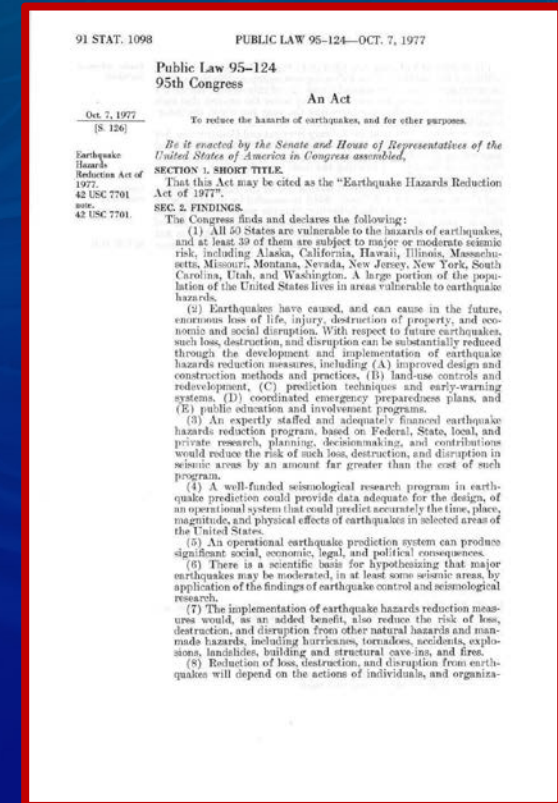


NIST
National Institute of
Standards and Technology

USGS
science for a changing world

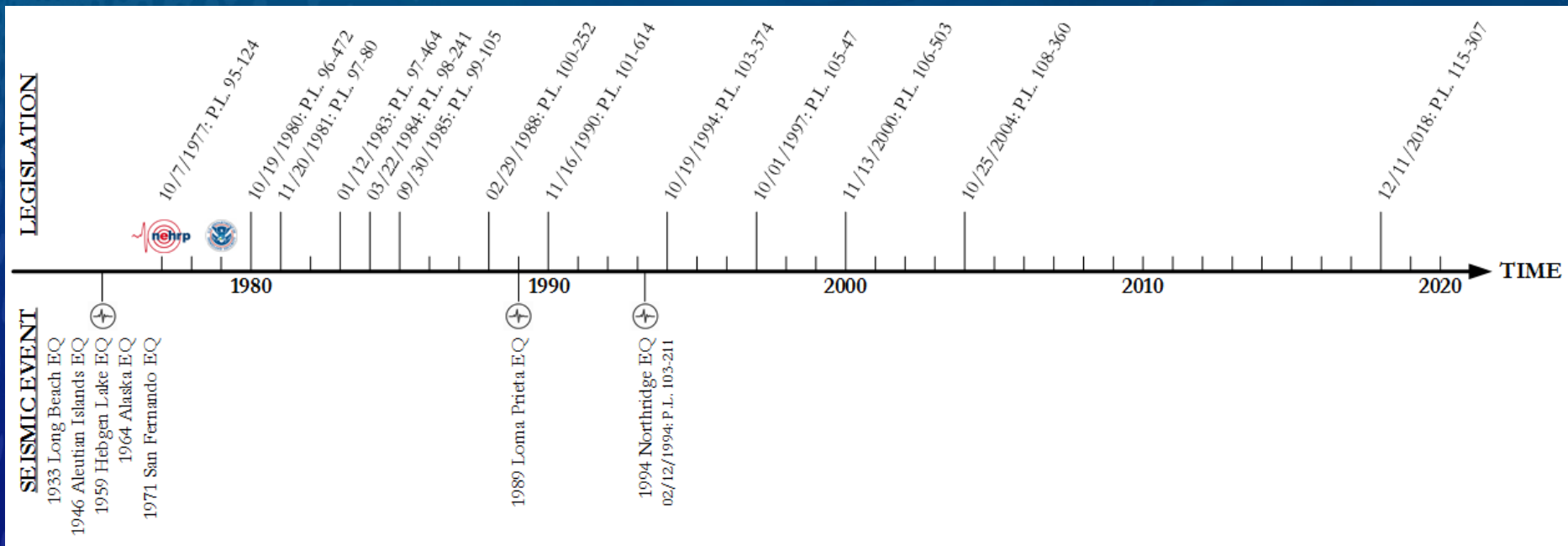
NEHRP Overview

- National program first authorized by Congress in 1977 (P.L. 95-124)
- Overall purpose: “...to reduce the risks of life and property from future earthquakes in the United States...”
- NEHRP was last reauthorized on Dec. 11, 2018 (P.L. 115-307)



NEHRP Overview

Timeline of the Earthquake Reduction Act of 1977 and Amendments

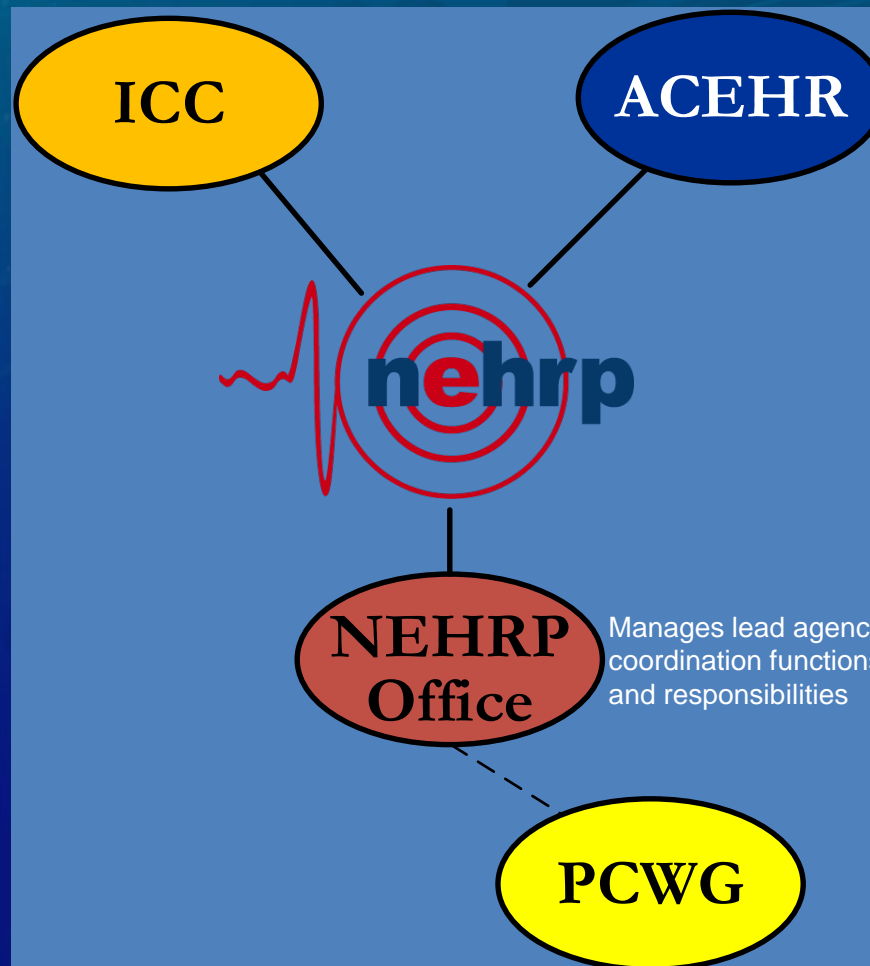


Major Statutory NEHRP Activities

- Conduct interdisciplinary research on earthquakes and earthquake effects on communities, structures, buildings, homes, and lifeline infrastructure (NSF, USGS, NIST)
- Monitor earthquake activity and characterize hazard, and lead post-earthquake investigations (USGS)
- Develop earthquake-resistant design and construction practices (NIST, FEMA)
- Develop and promote adoption of effective model building codes and practices for earthquake resilience (FEMA, NIST)
- Public education on earthquake risks and mitigation (All)

NEHRP Management – Principal Elements

Oversight and direction by NEHRP agency principals (+ OMB, OSTP). Responsible to Congress for program management and implementation



Provides advice to NIST Director on relevant developments in sciences and engineering, program effectiveness, needed program revisions, management, and implementation

Manages lead agency coordination functions and responsibilities

Working level coordination and program implementation, ICC and ACEHR support, preparation of required reports and plans

NEHRP Reauthorization Act of 2018

- Public Law 115-307
- Removes language regarding **earthquake prediction**, placing emphasis on **earthquake early warning**
- Added language begins the development process of alternative performance objectives beyond life safety
 - **functional recovery time**
 - **remain operational**
 - **community considerations**

NEHRP Reauthorization Act of 2018

- Key New or Amended Program Activities
§(5)(a)(2)
 - Publish a systematic set of maps of active faults and folds, susceptible to liquefaction or earthquake-induced land slides (*and other seismically-induced hazards*)
 - Continued support to develop, operate, and maintain the Advanced National Seismic System (ANSS)
 - Language for the George E. Brown Network for Earthquake Engineering Simulation has been stricken (except §14)

NEHRP Reauthorization Act of 2018

- Interagency Coordinating Committee §(5)(a)(3)
 - Changes the requirements to meet once a year from not less than three
 - Update the **NEHRP Strategic Plan**
 - Develop interagency MOUs with relevant Federal agencies to support (e.g., NOAA, NASA, etc.):
 - **data sharing**
 - **resource commitment in the event of an earthquake disaster**
 - **free-flowing exchange of information related to earthquakes**
 - §(5)(a)(4) Changes the *annual* report to *biennial*
- **No changes to Advisory Committee §(5)(a)(5)**

NEHRP Reauthorization Act of 2018

- Agency Responsibilities §(5)(b)(2)
 - FEMA
 - Primary duties essentially remain the same
 - Charged with support grants and assistance to enable States to develop mitigation, preparedness and response plans to enhance seismic safety
 - Prepare educational materials for national distribution to support earthquake awareness
 - Update and clarifications to state assistance program

Note: charging language for pre-disaster mitigation assistance and design standards provided in Disaster Recovery Reform Act of 2018 (P.L. 115-254)

NEHRP Reauthorization Act of 2018

- Agency Responsibilities §(5)(b)(3)
 - USGS
 - Primary duties essentially remain the same
 - Charged with support of seismic hazards maps for the Nation
 - Operate a National Seismic System (NSS) and support regional networks that complement the NSS
 - Develop standard procedures for issuing earthquake early warning alerts

NEHRP Reauthorization Act of 2018

- Agency Responsibilities §(5)(b)(4)
 - NSF
 - Primary duties essentially remain the same
 - Charged with supporting research on earth science to improve the understanding of earthquakes and the performance of the built environment and human response to earthquakes
 - Track and report not less frequently than once every 2 years, the amount of Federal funds awarded to conduct earthquake-related scientific research

NEHRP Reauthorization Act of 2018

- Agency Responsibilities §(5)(b)(5)
 - NIST
 - Primary duties essentially remain the same
 - No changes to Lead Agency responsibilities §(5)(b)(1)
 - Charged with carrying out research and development to improve community resilience to mitigate risks posed by earthquakes through advances in building codes and standards and construction practices

NEHRP Reauthorization Act of 2018

- Update to §(8) – **Seismic Standards**
 - **NIST and FEMA**
 - Charged with convening a Committee of Experts (CoE) to assess and recommend options for improving the built environment and critical infrastructure to reflect performance goals stated in terms of post-earthquake reoccupancy and functional recovery time (NTL 12/1/2019)
 - CoE shall submit report to the Congress by 06/30/20
- No changes to §(9) – **Acceptance of Gifts**
- No changes to §(11) – **Post-Earthquake Investigations**

NEHRP Reauthorization Act of 2018

- Update to Authorization Levels of Appropriations §(12)
 - 2019-2023
 - FEMA \$8,758,000
 - USGS \$83,403,000 – \$30M for ANSS
 - NSF \$54,000,00
 - NIST \$5,900,000

NEHRP Reauthorization Act of 2018

- Update to ANSS §(13)
 - **USGS**
 - Primary duties essentially remain the same
 - ***Submit a 5-year ANSS management plan to Congress (12/11/2019)
 - Strategies for an earthquake early warning system
 - Management and Advisory structure for ANSS
 - Collaboration with State and regional monitoring networks
- No Changes to §(14) – **NEES**
 - **NSF**
 - Not repealed (language is obsolete)

NEHRP Reauthorization Act of 2018

- As soon as practicable, but not later than 3 years after the date of enactment (12/11/2021), the Comptroller General of the U.S. (i.e., GAO) shall submit to the Congress a report on the findings of a review of Federal earthquake hazard risk reduction efforts

Discussions / Questions



FEMA

