National Earthquake Hazards Reduction Program (NEHRP)
Advisory Committee on Earthquake Hazards Reduction (ACEHR)
June 12-13, 2024 Virtual Meeting Summary

Attendees (listed alphabetically by category)

ACEHR Members

Lucy Arendt, Chair	St. Norbert College
Jeffrey Briggs	Missouri State Emergency Management Agency
Robert Carey	Utah Division of Emergency Management
David Cocke*	Structural Focus
Michael Hamburger	ACEHR ex-officio as SESAC Chair
Thomas Heausler	Consulting Structural Engineer
Tara Hutchinson	University of California, San Diego
Anne Meltzer	Lehigh University
Danielle Mieler	City of Alameda
Jonathan Stewart	University of California, Los Angeles
Douglas Wiens*	Washington University in St. Louis

NEHRP Agency Representatives

Christina Aronson*	Federal Emergency Management Agency
Luciana Astiz	National Science Foundation
Jason Averill	National Institute of Standards and Technology
Michael Blanpied**	United States Geological Survey
William Blanton	Federal Emergency Management Agency
Joannie Chin	National Institute of Standards and Technology
Tina Faecke (DFO)	National Institute of Standards and Technology
Jonathon Foster	Federal Emergency Management Agency
John "Jay" Harris	National Institute of Standards and Technology
Gavin Hayes	United States Geological Survey
Andrew Herseth*	Federal Emergency Management Agency
Steven McCabe**	National Institute of Standards and Technology
Jacqueline Meszaros	National Science Foundation
Siamak Sattar	National Institute of Standards and Technology

Registered Guests

Karyn Beebe*	International Code Council
Michael Mahoney*	Applied Technology Council

* Attended Wednesday only **Attended Thursday only

I. Welcome

As Designated Federal Officer (DFO) for ACEHR (or Committee), Ms. Tina Faecke called the meeting to order at 1:30 p.m. Eastern Daylight Time (EDT), took roll call for the Committee members, and confirmed the quorum requirement was satisfied. She announced the meeting will be recorded, reviewed some meeting logistics, and then turned the meeting over to Dr. Joannie Chin, who provided opening remarks.

Chin handed the meeting to the ACEHR Chair, Dr. Lucy Arendt, who asked if there were any questions. Since there were no questions, Arendt reviewed the meeting agenda and goals.

During the agency updates, the Committee should submit their questions or observations into https://www.slido.com/ which Arendt will moderate during both meeting days. Arendt also asked the NEHRP agencies to highlight any challenges they are currently facing in addition to their thoughts on how ACEHR could possibly facilitate closing any gaps.

II. NEHRP (or Program) Activity Updates

Dr. John Harris, Acting NEHRP Director, reviewed the NEHRP agency reporting cycle and then provided a brief update on the status of the NEHRP Reauthorization, the NEHRP Management Plan, the two U.S. Government Accountability Office (GAO) Assessment Reports, ACEHR recommendations matrix/history, and the Interagency Committee on Seismic Safety in Construction (ICSSC) since the March 26-27 ACEHR meeting. He also provided an overview of current ACEHR membership expertise and the lead agency role. Harris' update is available at https://nehrp.gov/pdf/1-NEHRP%20Overview%20Pres_ACEHR%20mtg_6.12.24_FINAL.pdf.

Discussion:

There was a question regarding the NEHRP reauthorization and the impacts if the reauthorization isn't approved. Even if the reauthorization isn't approved, the scope of NEHRP doesn't end and it will take a public law to rescind it. The NEHRP authorization funding levels ended in 2023 with the last reauthorization, but the agencies are still functioning and continuing their activities. ACEHR will also continue to function in accordance with the 2024 charter renewal for the next four years. Arendt noted that once NEHRP is reauthorized, there has typically been a new focus area for one or more agencies to accomplish, such as the functional recovery report which was assigned to NIST and FEMA in the 2018 Reauthorization.

The Committee noted they appreciate receiving the cumulative list of ACEHR recommendations and being informed of the NEHRP management plan progress. They are looking forward to completion of the management plan which will assist ACEHR in fulfilling their assessment of the Program.

FEMA Updates

Mr. William Blanton, Earthquake and Wind Programs Branch Chief, provided an overview of the FEMA NEHRP headquarters staff and regional staff, NEHRP enacted budgets from 2006 through 2024, and the FEMA NEHRP statutory requirements.

Mr. Andrew Herseth, structural engineer and NEHRP technical lead in FEMA's Earthquake and Wind Programs Branch provided the NEHRP technical team update. He highlighted how the seismic building codes, standards activities, training, and guidance publications support building code change proposals for the 2027 edition of the model building codes, i.e. International Building Code (IBC), International Residential Code (IRC), and International Existing Building Code (IEBC), as well as the 2028 edition of the American Society of Civil Engineers (ASCE)/Structural Engineering Institute (SEI) 7 referenced standard.

Mr. Jonathon Foster, senior program manager in FEMA's Earthquake and Wind Programs Branch, provided an overview of FEMA's free risk reduction training on seismic-related topics as well as the FEMA NEHRP State Assistance Grant Program updates. Under the Individual State Earthquake Assistance funding opportunity, non-competitive grant awards are anticipated for 22 states and territories in fiscal year (FY) 2024 totaling approximately $2.1 million (M).

Under the Multi-State and National Earthquake Assistance funding opportunity, competitive grant awards are anticipated for nonprofit organizations and institutions of higher education totaling approximately $1.3M. The Notice of Funding Opportunity (NOFO) for both programs were posted in May 2024, and all awards are anticipated to be made by August 1, 2024. The 18-month grant period of performance for both grant types is scheduled for September 1, 2024 through February 28, 2026.

The National Earthquake Program Manager (NEPM) hybrid annual meeting was held in St. Louis, Missouri from April 22-25, 2024. In 2023, there were 57 million worldwide participants in the Great ShakeOut Earthquake Drills. The FEMA update is available at https://nehrp.gov/pdf/2-FEMA%20Pres_ACEHR%20mtg_6.12.24_FINAL.pdf.

Discussion:
There was a brief discussion on the gradual decline in FEMA funding levels compared to the increased costs for conducting and completing NEHRP activities. The Committee asked if Congress provided feedback to FEMA or NIST on the functional recovery report, and the response was no. Another question was raised whether there is long-term FEMA interest to develop standards to support lifelines. Herseth noted in March 2024 NIST published volume one (Special Publication 1310) of a two-volume set titled *Initial Framework to Design Lifeline Infrastructure for Post-Earthquake Functional Recovery*. Volume two (Special Publication 1311) presents implementation of the framework to three lifeline infrastructure systems.

NIST Updates
An update for the Earthquake Engineering Group (EEG) at NIST was provided by Dr. Siamak Sattar, Acting EEG Leader, Materials and Structural Systems Division. He highlighted the NIST statutory responsibilities with regards to conducting research and shared photos of the EEG staff and the FY24 budget. He also provided an overview of three technical areas: 1) framework for functional recovery design of buildings; 2) a relational database of nonstructural elements; and 3) framework for functional recovery design of lifelines. Sattar's presentation is available at https://nehrp.gov/pdf/3-NIST%20Pres_ACEHR%20mtg_6-12-24_FINAL.pdf.

Discussion:
The Committee asked if the nonstructural performance database includes observations from reconnaissance. Sattar said the database currently doesn't include observations from the reconnaissance studies because they are focusing on the experimental data at this point, but he is willing to consider this comment regarding the validation aspect. Sattar feels that observations from earthquakes would be more useful if we have a recording of acceleration at the location of the nonstructural system in order to combine that information with the experimental data and final equations are validated at the end. It was noted the greatest challenge is gathering consistent data for increasing the validity and reliability. It is important that reconnaissance teams collect relative samples of their study and also determine ground motion parameters and uncertainty.

III. Closing Remarks
Arendt thanked everyone for their engagement, participation, and commitment.

IV. Adjournment for the Day
Faecke thanked everyone for their participation and officially adjourned the meeting at 4:30 pm EDT.

ACEHR VIRTUAL MEETING SUMMARY – Day Two
June 13, 2024 (1:30am-4:30pm EDT)

I. Call to Order and Opening Remarks

Committee DFO Faecke called the meeting to order at 1:30pm EDT, took roll call for the Committee members, and confirmed the quorum requirement was satisfied. She reminded everyone the meeting will be recorded and Committee questions or comments should be entered into https://www.slido.com/.

Arendt reminded the Committee their task today is to receive the NSF and USGS agency updates and then discuss, at a very high level, possible topics for the 2025 biennial report.

II. Public Input Period

Committee DFO Faecke reported that nobody will provide public comments today.

III. NEHRP (or Program) Activity Updates (continued)

NSF Updates

Dr. Jacqueline Meszaros, science and technology advisor, reviewed the NSF legislative responsibilities and announced the joint NSF-NIST Disaster Resilience Research Grants (DRRG) program (https://www.nsf.gov/pubs/2024/nsf24105/nsf24105.jsp) is sunsetting in anticipation of budget cuts. She informed the group that a new NSF disaster risk and resilience pilot web page (https://new.nsf.gov/focus-areas/disaster-resilience) was created to provide responses to the GAO recommendations and provided an update on the National Hazards Engineering Research Infrastructure.

Dr. Luciana Astiz, Geosciences Directorate program director, provided an overview of the NSF awards by Directorate from October 1, 2023 through August 1, 2024. She also highlighted two NSF Geohazard Centers focused on earthquake research as well as awards to develop submarine instrumentation. A question was raised regarding what consideration is taken into account regarding the location of ocean bottom seismometer sensors for collecting data. Astiz doesn't have the details, but suspects many variables (GPS, existing cables, etc.) are considered for determining sensor locations, taking into account the rough environment and limited possibilities.

The NSF presentation is available at https://nehrp.gov/pdf/4-NSF%20Pres_ACEHR%20mtg_6-13-24_FINAL.pdf.

Discussion:
A question was raised by the SESAC Chair about collaboration efforts with other agencies regarding the NSF Centers. Astiz noted that a Memorandum of Understanding must be developed before initiating other agency collaboration efforts. A Committee member expressed their appreciation for the new NSF focus areas web page.

USGS Updates
Dr. Gavin Hayes, senior science advisor for earthquake and geologic hazards, reminded the Committee of the USGS Earthquake Hazards Program (EHP) mission and shared the budget history and the FY25 budget request for EHP and the Global Seismographic Network (GSN). An update on the National Seismic Hazards Model (NSHM) and deployment efforts were presented. He highlighted the new GNSS algorithm for ShakeAlert, the international aftershock forecasting, and collaboration with the Southern California Earthquake Center. The USGS will conduct external grant reviews to determine why EHP research grant proposal submissions continue to decline. Hayes' presentation is available at https://nehrp.gov/pdf/5-USGS%20Pres_ACEHR%20mtg_6-13-24_FINAL.pdf.

Discussion:
One Committee member asked if there is any funding competition tension at USGS between the different hazards. Hayes responded that most of the USGS budgets remain flat over the years. Appreciation was expressed regarding the value at a State level for the USGS "did you feel it" data, and asked about the percentage of people that responded compared to those that actually felt the earthquake. Hayes replied that a general number of people that actually felt the earthquake could be obtained by comparing a Modified Mercalli Intensity (MMI) value to a population dataset. USGS relies heavily on search engines such as Google. USGS also communicates the earthquake response opportunity through the media, and PAGER also includes a calculation of how many people experience an earthquake at an MMI level.

Several comments were shared by the Committee expressing their appreciation for the organization and content presented by each agency in addition to the agencies' gracious willingness to accept and address the questions posed by the Committee. Arendt suggested having the agencies identify challenges or gaps in their future updates where ACEHR could be helpful highlighting any potential impacts.

IV. 2025 ACEHR Biennial Report Discussion
Arendt plans to provide a rough ACEHR report outline including possible content and processing, topics, and the overarching issue of how ACEHR can be most helpful that the DFO can share with the ACEHR members in advance of the August hybrid meeting.

V. Closing Remarks
Arendt expressed her sincere appreciation to each of the agencies for their hard work on the activity updates and also thanked everyone for their engagement, participation, and commitment.

VI. Adjournment for the Day
Faecke thanked everyone for their participation, reminded them of the hybrid meeting at NIST in Boulder, CO, on August 7-8, 2024, and officially adjourned the meeting at 4:30 pm EDT.

We hereby certify that to the best of our knowledge this meeting summary is accurate and complete.
Ms. Tina Faecke, Designated Federal Officer, NIST Advisory Committee on Earthquake Hazards Reduction (ACEHR)
Dr. Lucy Arendt, Chair, NIST Advisory Committee on Earthquake Hazards Reduction (ACEHR)

Lucy A. Arendt, Ph.D.