

**National Earthquake Hazards Reduction Program (NEHRP)
Advisory Committee on Earthquake Hazards Reduction
National Institute of Standards and Technology
Gaithersburg, Maryland
May 3, 2017**

Teleconference Meeting Summary

Advisory Committee Members:

Laurie Johnson, Chair	Laurie Johnson Consulting
Jane Bullock**	Bullock & Haddow LLC
Craig Davis	Los Angeles Department of Water & Power
Gregory Deierlein	Stanford University
John Gillengerten	Consulting Structural Engineer
James Goltz	CA Emergency Management Agency
Nathan Gould	ABS Consulting
Lisa Grant-Ludwig	University of California, Irvine
Robert Herrmann	Saint Louis University
Ryan Kersting	Buehler & Buehler Structural Engineers, Inc.
Ronald Lynn	Nevada State Contractors Board
Peter May	University of Washington
Lori Peek	University of Colorado-Boulder
Glenn Rix	Geosyntec Consultants, Inc.
David Simpson	IRIS Consortium
Ralph Archuleta	University of California, Santa Barbara; Ex-officio member of ACEHR as Chair of the U.S. Geological Survey (USGS) Scientific Earthquake Studies Advisory Committee (SESAC)

** Not in attendance

NEHRP ICC Member-Agency Representatives and NIST Support:

Howard Harary	NIST, Engineering Laboratory (EL) Director and ACEHR Designated Federal Officer
Jason Averill	NIST/EL, Chief, Materials and Structural Systems Division
Steven McCabe	NIST/EL, NEHRP Director
Ed Laatsch	FEMA, Director, Safety, Planning & Building Science Division
Gregory Anderson	NSF Acting Integrated Activities Section Head, Division of Earth Sciences and Program Director
Rick Fragaszy	NSF Program Director, Division of Civil, Mechanical and Manufacturing Innovation
David Mendonca	NSF Program Director, Division of Civil, Mechanical and Manufacturing Innovation

Michael Blanpied	USGS, Associate Coordinator, Earthquake Hazards Program
Cecily Wolfe	USGS, ANSS Coordinator & Associate Coordinator for Earthquake Hazards, Global Seismographic Network, and Geomagnetism Programs
John Filson	USGS Retiree
Tina Faecke	NIST/EL, NEHRP Secretariat
Jennifer Horning	NIST/EL, Materials and Structural Systems Division

Summary of Discussions

I. Review Meeting Goals and Agenda

- a. Laurie Johnson, Chair of the Advisory Committee on Earthquake Hazards Reduction (ACEHR), called the meeting to order and asked Tina Faecke to call the roll of the ACEHR members and other attendees. Harary made opening remarks and announced that McCabe accepted the NEHRP Director position, and Rix accepted the position of ACEHR Vice Chair.
- b. Johnson announced that the purpose of the meeting was to review and obtain consensus on the draft outline for preparing the ACEHR biennial report on NEHRP effectiveness before September 30, 2017. A draft of the outline was emailed to all meeting attendees and posted on the NEHRP website prior to the meeting.

II. ACEHR Draft Biennial Report Outline

Johnson led the general discussion, which proceeded systematically through the proposed outline for the report. Volunteers were solicited to lead and draft each report section.

Overarching Considerations Section

May agreed to work on this section, with Johnson taking the lead. All members present agreed on the proposed topics to be covered in this section.

Management, Coordination, and Implementation Section

The previous ACEHR concern of appointing a permanent NEHRP Director has been addressed. During the November ACEHR meeting, several members recommended that the NEHRP Interagency Coordinating Committee (ICC) meet before the end of the prior administration, but scheduling an ICC meeting was not possible because of the principals' availability in November and December. It was recognized that the NEHRP reauthorization should be monitored closely, as well as the appointment process of NEHRP agency principals, in scheduling the next ICC meeting. Currently, there are no permanent NEHRP agency principals in place aside of NSF; the appointment process usually takes about a year in a new administration.

A question was raised whether the ICC was meeting its purpose, and if there were another mechanism to ensure a coordinated effort toward meeting NEHRP goals. It was suggested that delegates could attend if the NEHRP principals were not available (as is stated in the NWIRP legislation, but is not directly addressed in the NEHRP legislation). During monthly NEHRP Program Coordination Working Group (PCWG) meetings, issues to be addressed at future ICC meetings will be identified.

ACEHR discussed the NEHRP Secretariat Office and the possibility of honing in on cross-cutting initiatives. The previous strategic plan timeline was 2008 – 2013. At present, the NEHRP Secretariat Office is still functioning under the same strategic plan; the members discussed whether there was a need to revisit the Strategic Plan following NEHRP reauthorization with an emphasis on coordination and collaboration.

Johnson indicated the need to conduct an implementation assessment and that the NEHRP Secretariat Office should maintain this as a goal. McCabe stated that there have been discussions to this effect. An implementation assessment complements the strategic plan; gaps that existed and were identified earlier still exist. The assessment would help to define the thrust of a new strategic plan and its focus.

Johnson noted that there was a recommendation in the 2013 ACEHR report regarding a building seismic rating system. This was elevated in 2015 from agency to NEHRP Secretariat level. ACEHR elevated this to a formal request for federal leadership in the development of a consensus standard for rating systems. The question was raised whether to continue this recommendation in the 2017 report. ACEHR discussed whether enough progress has been made in the private sector in developing such a standard.

- It was observed that rating systems should be feasible to implement in terms of cost and effort; current systems may be so complex that they are un-implementable. However, tools are under development to allow basic prediction of how design changes could influence performance. If simplified tools became available, there could be more progress.
- McCabe observed that standardizing implies prescription of requirements, or of the rating system itself; it is not clear which is desired, and the two are not the same.
- Davis noted that the earlier requests to NEHRP were changed based on federal government limitations in developing systems for deployment in the private sector.
- Harary noted that with standards, ANSI has previously mediated scope amongst standards developing organizations in order to limit overlap and conflict; NIST has limited ability to coordinate consensus-based standards.
- Averill noted that one of the challenges facing the Leadership in Energy and Environmental Design (LEED) certification of green buildings is validation; there may be reluctance to implement a resilience rating system if the outcomes are not validated.
- Gillengerten observed that the question of seismic performance goes beyond life safety; building codes have always had a life safety focus, but this may be changing. There is an

effort led by the Building Seismic Safety Council (BSSC) NEHRP Provisions Update Committee to establish performance objectives beyond life safety. This new approach will be part of the 2020 NEHRP Provisions.

The following ACEHR report assignments for this section were made: Bullock and Johnson will work on the ICC topic and Lynn will lead the topic on building rating systems with assistance from Gillengerten and Gould; Kersting will give insight when appropriate.

Program Effectiveness and Needs Section

Johnson proposed at least three ACEHR members to work on each agency draft, and all present agreed with their assignments. The goal is for each author to contribute high-level recommendations of no more than one page for each agency. The team leads are indicated in bold, as follows:

FEMA: Bullock, Lynn, **Gillengerten**, Goltz

NIST: Davis, Gould, Kersting, **Rix**

NSF: Deierlein, May, **Peek, Simpson**, Ludwig

USGS: Goltz, **Herrmann**, Ludwig, Archuleta, Simpson

The status of the 2016 SESAC report was raised; USGS will provide an update after this teleconference. McCabe indicated that there are ongoing discussions at NIST on providing briefing books from various agencies for the new administration and brochures for NEHRP. New ICC members will need to be educated (there will be nearly a complete turnover).

Presentations from the Portland 2017 Earthquake Engineering Research Institute (EERI) Annual Meeting are posted on the NEHRP website and linked to the EERI agenda, including the slide set from the *NEHRP at 40* session.

Trends and Developments Section

The length and purpose of this section was discussed and whether the past format worked effectively, or needed to be revised. The question arose of the big challenges and potential breakthroughs from research. Each ACEHR member was assigned a topic. No lead is needed; members should email ideas to Johnson, who will coordinate them.

The Chair then called for a final vote by the committee members to approve the topics and assignments discussed during the meeting. The draft outline was unanimously approved. Davis suggested that earthquake engineering members are the same as the NIST team, and are related in focus toward resilience. Rix and Davis can coordinate together and limit duplication. Everyone involved in the agency-specific discussion are to think of ideas and provide to the Chair as bullet-points to limit length. Members should look across topic areas and identify any additional topics for this section.

Johnson is happy to talk one-on-one with any member who has questions or suggestions.

III. Public Input Period

No members of the public registered with the NEHRP Office to provide input for this teleconference meeting, nor did any members of the public join the teleconference.

IV. Action Items

It was unanimously agreed that ten days is adequate for ACEHR members to review the draft sections prior to their July 24-25, 2017 meeting. All draft assignments are to be emailed to the lead author no later than June 12, 2017. The lead authors shall email draft sections to Faecke by June 26, 2017. Johnson, McCabe, and Faecke, will discuss a possible completion date of July 14, 2017. The final report deadline for submitting the report to the NEHRP ICC Chair is September 30, 2017.

Action	Lead	By When
Submit all draft detailed writing assignments to lead authors	ACEHR Members	June 12, 2017
Submit all draft sections to Tina Faecke	ACEHR Lead Authors	June 26, 2017
Distribute draft ACEHR Biennial Report to ACEHR members	Tina Faecke	July 14, 2017 (tentative)
ACEHR Biennial Report to be submitted to NIST Director, as ICC Chair	ACEHR Chair	September 30, 2017

McCabe suggested going to electronic meeting materials for the face-to-face meetings; members were asked to send their response to Johnson within the next day, to be shared with the NEHRP Secretariat Office. Members expressed the desire to have meeting materials well in advance to allow time for review to conduct productive discussions at ACEHR meetings.

V. Adjournment

Harary thanked Johnson for leading the meeting and the members for attending, adjourning the meeting at 5:00 p.m. EDT.