



WORKSHOP: THE HAYWIRED SCENARIO & RESEARCH NEEDS FOR RESILIENT NEW BUILDINGS

PEER is partnering with the United States Geological Survey (USGS) to co-host this workshop to identify research needs and opportunities arising from the USGS HayWired Scenario's examination of outcomes of current building code requirements.

DATE & LOCATION

January 17, 2018, 2:30pm – 5pm

Sibley Auditorium, Bechtel Engineering Center,
UC Berkeley

Parking: Stadium Parking Structure, 2175 Gayley
Road

WORKSHOP PROGRAM (2:30pm – 5pm)

- Welcome and Objectives
Khalid Mosalam, UC Berkeley
Keith Porter, CU Boulder
- The HayWired Scenario
Dale Cox, USGS
- Viewing the Code through HayWired
Keith Porter, CU Boulder
- PBEE as a Resilience Option
Laura Samant, Risk Management Consultant
- Community Information Needs for Resilience
Options
Laurence Kornfield, City of San Francisco
- Discussion

WHO SHOULD ATTEND

The intended audience includes researchers, students, and practitioners currently addressing challenges of measuring and enhancing new buildings' earthquake resilience. **Attendees are requested to read pp13-15 of the HayWired Scenario document which is available at <https://pubs.usgs.gov/sir/2017/5013/sir20175013ah.pdf>**

FREE – Please register at PEER:

<https://peercenter.wufoo.com/forms/zjku5jx19a4g7h/>

This workshop is a pre-conference event of the 2018 PEER Annual Meeting, to be held January 18-19, 2018, at UC Berkeley. For program and registration information, refer to:

http://peer.berkeley.edu/events/annual_meeting/2018AM/

The HayWired scenario asks, “what if a Magnitude 7.0 earthquake happens on the Hayward Fault starting under Oakland, California, on 4/18/18 at 4:18PM?” In this workshop, participants will discuss how scenarios like HayWired can inform a research agenda for new buildings' earthquake resilience.

Experts from many disciplines estimated earth-science hazards, engineering impacts, and socioeconomic consequences of a large earthquake on the country's most urbanized and active fault. Among other products, HayWired estimates outcomes if every Bay Area building met current code requirements before the earthquake occurred, providing a lens through which to view code objectives and options for a more resilient future building stock. Following the presentations, attendees will discuss four questions:

1. What can a scenario say about building code adequacy that code writers should consider? How does this compare with what communities should consider?
2. Under what conditions is PBEE a practical resilience option for new buildings? What about increasing design strength and stiffness? What about other features such as self-centering frames? Others?
3. What current research could inform building code-writers' and code-adopters' decisions about resilience options?
4. What new research is needed to inform those decisions?