

2012 Year-End Report

for the **Northern California Chapter** of the
Earthquake Engineering Research Institute

January 2013



This document summarizes the activities conducted by the Northern California Chapter of the Earthquake Engineering Research Institute (EERI-NC or the Chapter) in 2012.

EERI NC Mission & Goals

As defined in the EERI-NC Strategic Plan, the mission of the Northern California Chapter is to reduce earthquake risk in Northern California by advancing the science and practice of earthquake engineering, by improving understanding of the impact of earthquakes on the physical, social, economic, political and cultural environment, and by advocating comprehensive and realistic measures for reducing the harmful effects of earthquakes. To meet the Chapter's mission, the Chapter's goals are to build and **Maintain an Active Chapter** of the Earthquake Engineering Research Institute in Northern California and to **Encourage, Promote and Facilitate Earthquake Risk Reduction in Northern California**. The Chapter works to achieve its goals by carrying out specific strategies and related activities.

Membership in 2012

The EERI-NC Chapter had a total of 178 members in 2012 including 131 regular members, 12 Northern California Chapter only members, 4 honorary members, 4 student members, 13 retired members, and 14 young professional members.

The board consisted of the following members:

President	Janiele Maffei
President-Elect	Heidi Tremayne
Secretary/Treasurer	Marko Schotanus
Director	Danielle Hutchings Mieler
Director	Jennifer Donahue
Director	Ayse Hortacsu
Director	Keith Kelson
Director	Laurence Kornfield
Director	Laura Dwelley-Samant

Board meetings were held monthly.

Finance

An operating budget of \$4,500 was approved for 2012, which covered expenses for chapter meetings, as well as the email service. Revenues from membership dues totaled \$4,285, and expenditures \$4,036, leaving a net surplus of \$249.

The Chapter has typically operated within budget over its 10 year history, and has built up a surplus of about \$17,000. The board has started discussions on how to put this money to use to further the Chapter's mission. To start the process, Chapter Secretary/Treasurer Marko Schotanus drafted a Finance Policy and an Operating Reserves Policy, which were discussed and approved by the Board. The Board will continue discussion of the use of the surplus in 2013.

Chapter Meetings

The following eight Chapter meetings were held in 2012, organized by the Program Committee consisting of John Liao, Pantea Vaziri, and Nick Sherrow-Groves.

February Chapter Meeting

Wednesday, February 15, 2012

Venue: ABAG Auditorium, 101 8th Street, Oakland

"Mitigation and Insurance: A combined approach to earthquake resiliency"

Presenter:

- Janiele Maffei, Chief Mitigation Officer, California Earthquake Authority

April Chapter Meeting

Wednesday, April 25, 2012

Venue: Arup office, 560 Mission Street, Suite 700, San Francisco

"Lifelines Interdependency Research, Lessons, and Mitigation Efforts Underway in the San Francisco Bay Area" – annual 1906 San Francisco Earthquake meeting

Panelists:

- Dr. Leonardo Duenas-Osorio, Assistant Professor of Civil and Environmental Engineering, Rice University
- Danielle Hutchings, ABAG Earthquake and Hazards Program Coordinator
- Dr. Laurie Johnson, Lifelines Interdependency Study Coordinator, CCSF Lifelines Council

June Chapter Meeting

Wednesday, June 6, 2012

Venue: 240 Bechtel, UC Berkeley Campus, Berkeley, CA

"Mandatory Evaluations Can Motivate (Some) Landlords to Mitigate Seismic Risk"

Presenter:

- Sharyl Rabinovici, PhD Candidate, Goldman School of Public Policy, UC Berkeley

August Chapter Field Trip

Saturday, August 18, 2012

Venue: Telegraph Hill and San Francisco's waterfront

"San Francisco's slides, settlements, slips, quarries, faults and fractures"

Tour guide:

- Frank Rollo, geotechnical engineer, Treadwell & Rollo

October Chapter Meeting (jointly with SEAONC)

Tuesday, October 2, 2012

Venue: City Club, 155 Sansome Street, 10th Floor, San Francisco, CA

"Earthquake and Post-Earthquake Fire Testing of a Full-scale 5-story Building outfitted with Nonstructural Components on the World's Largest Outdoor Shake Table"

Presenter:

- Tara Hutchinson, Professor of Structural Engineering, University of California, San Diego

October Chapter Meeting (jointly with the Stanford EERI Student Chapter)

Wednesday, October 17, 2012

Venue: Y2E2, Room 300 (Karl Knapp Conference Room), 473 Via Ortega, Stanford, CA 94305

"Seismically Isolated Unibody Residential Buildings for Enhanced Life-Cycle Performance" and "Rapid Post-earthquake Damage Assessment Using Combined Remote-sensing and Limited Field-based Damage Data"

Presenters:

- Scott Swensen, PhD Candidate, Stanford University
- David Lallemand, PhD Candidate, Stanford University
- Eduardo Miranda, Professor of Civil and Environmental Engineering, Stanford University

December Chapter Meeting (jointly with PEER)

Thursday, December 6, 2012

Venue: Room 502 Davis Hall (5th floor) at UC Berkeley

"EERI Distinguished Lecture: The New Normal for Natural Disasters"

Presenter:

- Tom O'Rourke, Thomas R. Briggs Professor of Engineering, Cornell University

December Holiday Party

Wednesday December 12, 2011

Venue: Marines' Memorial Club, Regimental Room, 609 Sutter St., San Francisco

"Party and Chapter Awards Presentation"

The high number of meetings was made possible by board leadership, in particular from Director Ayse Hortacsu. Attendance ranged from 20 – 50 people for each meeting, with wide variation in actual attendees each meeting which was most likely because of the varied topics selected. Ken Mark took photos for the archives at the Field Trip in August, and at the Holiday and Awards meeting in December.

It is the goal for 2013 to make the program committee more autonomous, and plan further ahead. Director Ken Mark will be the board liaison for the committee.

Quarterly Shake

Director Jennifer Donahue was the editor of the Chapter newsletter, the Quarterly Shake. It was issued twice in 2012. The Winter newsletter was issued in February, and the Spring Newsletter in June. The goal for 2013 is to issue a newsletter in each quarter. Director Laura Dwelley-Samant will take over as the editor.

YouTube and webinars

Heidi Tremayne, President-Elect, has access to recording and broadcasting equipment and software through the PEER center. It has allowed the Chapter to record the Hayward fault scenario presentation, the June Chapter program, and broadcast the December lecture live over the internet. The recordings have been posted to the EERI YouTube channel. Recordings of meetings will allow more members to learn from the programs. It provides yet another mechanism to reach the membership base.

Hayward Fault Scenario

In 2008 the Chapter was funded by USGS to make an update for the 1996 Hayward Fault Scenario. Janiele Maffei was selected to lead this project in 2009. In May 2011, the final updated Hayward Fault Scenario document titled "*THE COMING BAY AREA EARTHQUAKE: 2010 Update of Scenario for a Magnitude 7.0 Earthquake on the Hayward Fault*" was finished and posted on the EERI-NC website. In 2012, Heidi Tremayne made a video recording of the presentation by Janiele Maffei, and posted it on EERI's YouTube channel. The video is broken up in clips, one for each report chapter. In addition, a summary of the presentation was made to make the information more accessible. A link to the channel was embedded in the Chapter website.

Adopt-A-City Project

As an outcome of the 2011 strategic planning meeting, the Board decided to launch the "Adopt-A-City" program. Its goal is to engage in a coordinated effort to improve understanding of the risk, vulnerability and impact of a future earthquake for cities along the Hayward Fault, and to empower the stakeholders within the cities to develop comprehensive and realistic measures to mitigate their earthquake risk. The first city selected was Albany.

In 2012 work started to activate Chapter members to form a committee, and to reach out to City of Albany officials.

In January, Heidi Tremayne and Keith Knudson discussed the direction of the Adopt-A-City project with people in Albany's planning department, and it seemed that their main interest was in developing a building inventory. A kick-off meeting with Chapter members (Survey Workgroup) took place in February, with a focus on organizing a survey to help develop the inventory. The meeting was well attended, with 12 members present.

After the February meeting, Heidi Tremayne, Keith Knudsen, and Janiele Maffei met with Jeff Bond (director of community development) and Ann Hersch (city planner) of the City of Albany. They confirmed the interest in doing an inventory that identifies vulnerable buildings. Albany's long term goal is to develop some policies towards resiliency. Multi-unit residential buildings with a soft/weak story deficiency are the highest priority.

Since the City officials were interested in attending the Survey Workgroup meeting, the second meeting was held at City Hall in Albany. Results from a preliminary HAZUS run performed by Mahmoud Hachem were discussed and spurred some interesting discussion regarding fire following earthquake. The city officials expressed interest in engaging their fire chief to discuss implications, and possible data that could be collected to better characterize this risk. At the end of the meeting the

workgroup was split up in smaller groups that would each focus on discussing what data to collect for certain groups of buildings (single family residential, multifamily, commercial, concrete). The city officials expressed interested and offered help in sharing data the city already gathered, including research of their permit files to determine the rate of permitted retrofits.

At a third meeting of the Survey Workgroup in May four subgroups (single family residential, multifamily, concrete, and commercial) presented preliminary findings for Albany, and some considerations on forms to use for a survey. The City of Albany stressed its interest in soft-story multi-family rental properties, to make sure the tenants can shelter in place after an earthquake.

After the meeting the following two goals were identified to move the effort forward:

1. Complete a full inventory. More detailed information on Albany's building stock will allow completion of a customized HAZUS run that can help quantify vulnerabilities. It will further provide an opportunity to compare various ways of collecting data, such as a Google StreetView survey versus a sidewalk survey, and provide information on how a partial survey can provide the most useful information. This will help the Chapter to make recommendations on the best practices for future efforts in other cities.
2. Complete a customized HAZUS run. The customized run will use more refined hazard building inventory data, and should provide more accurate results. The HAZUS run will function as back up evidence to support conclusions and recommendations regarding Albany's vulnerabilities.

The focus for 2013 will be on doing the complete building inventory and a refined HAZUS run.

2012 Election Results

The 2012 election was held from Sept 28 – October 16 using the LimeSurvey software. Chris Barkley, Chair, Richard Eisner, Kate Stillwell, and Ivan Wong served on the nominating committee. Chris Barkley confirmed the results of the vote. Sixty-two Chapter members completed their online ballots to elect three Directors at Large. The winners were:

- Sharyl Rabinovici – Director-at-large
- Chuck Real – Director-at-large
- Ken Mark – Director-at-large

This year the board decided to ask the nominating committee to select as many candidates as there were positions. The newly elected board members joined the board officially at the November 14 Board Meeting. Directors Ayse Hortacsu, Jennifer Donahue, and Keith Kelson retired.

2012 "Innovation and Exemplary Practice in Earthquake Risk Reduction" Award Winners

Each year the Chapter gives two awards, to an individual and an institution, in recognition of their hard work and dedication towards the reduction of seismic risk in Northern California. The nominating committee consisted of Mary Lou Zoback, David Bonowitz, and Tom Tobin (Chair). The Chapter presented its 2012 "Innovation and Exemplary Practice in Earthquake Risk Reduction" awards during the December 12 Holiday Party at Marines Memorial Club in San Francisco. The winners were:

- Susan Garcia (individual), Public Information Specialist, Earthquake Hazards Program, U.S. Geological Survey, for her enthusiasm, dedication and tireless public service through public outreach related to earthquake safety and for her role in helping organize and promote the innovative Bay Area Earthquake Alliance.
- University of California, Berkeley (institution), for its innovative and sustained efforts to improve earthquake safety and resilience through its Seismic Action Plan for Facilities Enhancement and Renewal (SAFER) and its Disaster Resistant University program.

At the February Chapter meeting the Board of Directors presented a special award for "Life Time Achievements in Earthquake Risk Reduction" to Jeanne Perkins. From 1975-2006, Jeanne served as the Earthquake and Hazards Program Manager and Principal Scientist for the Association of Bay Area Governments (ABAG), conducting cutting edge research and managing innovative projects to help the Bay Area handle natural and man-made disasters. For over 40 years Jeanne has brought immense passion and energy to ensuring that the Bay Area will be able to withstand an earthquake or natural disaster and her efforts will have a lasting impact on the Bay Area. Jeanne was also presented with a certificate of appreciation from the ABAG and a proclamation from Oakland Mayor Jean Quan.