

# CanHUG Teleconference Notes

10:30 - 11:30 am Pacific Time, April 20, 2011



## **Agenda**

Introduction

Vignette: Kate Ploeger on loss-estimation research for Ottawa City.

Discussion

Summary and next meeting

## **INTRODUCTION**

Round of greetings

Group encouraged to submit an abstract to the CRHNet 2011 symposium in Ottawa, October 19 – 21 for the CanHUG and RAUG session. See [www.crhnet.ca](http://www.crhnet.ca) for details and the online abstract submission form.

You can profile yourself and your work at the <http://Georisk.info> CanHUG workspace. Your contact information has room to explain your recent projects. All participants in the workspace can search the contacts database for keywords.

## **Vignette**

Earthquake loss-estimation for the city of Ottawa; by Kate Ploeger, PhD candidate, University of Ottawa

The presentation can be downloaded as a podcast from iTunes, courtesy of Brenna Reilly of Jamie Caplan Consulting.

The following are some notes taken during her presentation.

- MSc research using HAZUS to estimate the losses from model earthquakes affecting the city of Ottawa.
- Two census tracts and 10 dissemination areas including Parliament Hill and the Byward Market area.
- Soil included bedrock, till and marine clay.
- Used Atkinson and Boer 1995 and 2006 for information on ground motions.
- Worked with Jim Hunter, GSC, to make a microzonation map for the area.
- Considered landslide triggers and liquefaction and they were not a problem.
- Had to build the inventory of 5,000 buildings and did that through students who went through the area making records of the buildings. Gathered data from visual character of the outside of the building and translated that through algorithms into square footage and such.
- The area was calculated to have 6,500 people at night and 76,000 during the day.
- Calculation based on various earthquake scenarios; Magnitude 5 to 7 and the National Building Code standard event (25 in 50 years)
- Results of 44% damage and 135 casualties for the 1/2500 year scenario. 83 Damaged buildings

in the Byward market (unre-inforced masonry buildings common)

- Variable vulnerability
- Parliament area had the most casualties.
- Most debris in the City Hall area where the high rises are.
- Ran the calculations using the actual earthquake of Magnitude 5 and it replicated the actual results.
- Excited about new Canadian version of Hazus so it won't need to be tricked anymore to be used in Canada.
- Kate is building a loss-estimation program called ArcCanRisk. The software calculated building by building effects, and looks at post-event effects for 72 hour period.

Discussion

Q: Who else at the University of Ottawa is working on this?

Kate: I am the only one.

C: Public Safety Canada is writing a national earthquake plan

Kate: talked with Cathy Collins at Public Safety, who does corporate building safety.

Q: What is ArcCanRisk?

Kate: loss estimation tool that visualizes the damage zone as maps and calculates building by building damage.

C: Building modules for masonry and database inventories of built environment data. Would be good to have database of case studies for Canada's large urban centres.

C: Topics like this would be great to put on the HUG speakers bureau and the HERC.

C: GSC is setting up Hazus training in Canada for late fall or early winter.

## ***Next meeting***

Meetings are by teleconference every third Wednesday of the month from 10:30 to 11:30 am Pacific Time.

Next meeting is May 18<sup>th</sup>

We may be taking July and August off.

## ***CONTACTS AND SUCH***

For information contact

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### **Background**

Canadian HAZUS Users Group (CanHUG) information can be found at <http://www.usehazus.com> on

the international user group page. That information and tools to blog and discuss topics, and share documents can be found at <http://Georisk.info> under the CanHUG workspace.