

## Telemeeting Notes

September 19, 2012, 10:30 – 11:30

1-877-413-4790 conference ID 3381344#



@RiskAUG

## Introduction

The forum is the 13th of monthly opportunities to share knowledge about incorporating Hazus Risk Assessment into disaster reduction decisions in Canada. The NRCan Quantitative Risk Assessment Project of the Public Safety Geoscience Program supports the forum until November 2013 (or so, maybe).

### ***Suggested telemeeting program :***

- 1 Introductions, news and views
- 2 QnA
- 3 Update on changes in Canadian Hazus (Nicky)
- 4 Vignette: Marty Zaleski, Use of Hazus for earthquake loss estimation in Victoria, a thesis project
- 5 Discussion

## Your News and Opportunities

### ***What's Your Hazus News?***

#### ***Disaster scenarios for fun and reward***

For Fun get involved in ShakeOut BC, October 18. <http://www.shakeoutbc.ca/regions/>

Maggie asked whether you would like a dedicated CanHUG website or using resources like a Group on LinkedIn. Most wanted a dedicated site, as long as they got notices of changes to site content.

### ***Regional HUGS or CanHUGlets or more intimate hugs.***

Last time we talked about the potential of starting regional HUGS in Canada. Bert will send out results of a survey done on creation of a BC chapter. Had 20 respondents and interested people.

## ***FEMA contracted a New Hazus manager***

1. Existing resources and new postings from USA and Canada HUG can still be found at [www.usehazus.com](http://www.usehazus.com). Includes: podcasts of previous Hazus User Group meetings at <http://www.usehazus.com/hugs/podcast/> and iTunes (search Hazus).
2. Hazus.org still exists and has content and updates

Now Hazus outreach services will be run by Arc Aspicio. You can see them on the Hazus Group of LinkedIn. You can contact them at [Hazus@arcaspicio.com](mailto:Hazus@arcaspicio.com).

Arc Aspicio consists of:

Lynn Anne Casey

Christina Tierno

Kathleen Goulding

They will:

1. support user groups
2. do Hot Zone newsletter
3. update user guides
4. manage Hazus versioning schedule

Information comes out through FEMA GovDelivery which is a FEMA RSS feed that includes option to turn on feeds about HAZUS.

## ***CanHUG on [www.usehazus.com](http://www.usehazus.com), LinkedIn, Facebook and Twitter***

On [www.usehazus.com](http://www.usehazus.com) look for the International user groups, scroll down and pick CanHUG.

On LinkedIn we are Canadian Hazus Users Group

On Facebook we are RAUG (Risk Assessment Users Group)

On Twitter we are @RiskAUG

## ***Hazus 2.1 Canada Update, Nicky Hastings***

Contact Nicky Hastings for a copy. [nicky.hastings@nrcan.gc.ca](mailto:nicky.hastings@nrcan.gc.ca)

CDMS (Comprehensive Data Management System) beta for Canada is now available, along with an updated version of the earthquake module for Hazus 2.1 Canada.

The Hazus Canada project at NRCAN is concentrating on creating guidelines for using Hazus Canada and interpret its results. Those guides describe the differences from the USA version and do not duplicate general guides that already exist on how to use Hazus.

If you have comments on the format and content of the guides please let Bert know and he will transmit them to the writers.

The Hazus Canada team at NRCan have facilitated creation of a suite of earthquake hazard scenarios for Metro Vancouver and Quebec to Ottawa corridor.

Hazus Canada was used to create disaster scenarios for various earthquake exercises conducted in Metro Vancouver. The latest will be conducted on October 18 (Mag 2012). Those scenarios will be added to over time with the intent to publish a suite.

Q: Could these be compared to the 2003 Hazus run for New Westminster?

A: Only in part. The asset inventory is different, the scale is different and the earthquake scenario parameters are different.

Q: Who is using Hazus, because it would be helpful to know?

A: We began to list some and then Bert took on compiling a list.

### ***CRHNet 2012 call for abstracts. (Annual Symposium, October 24- 26, 2012, Sutton Place Hotel, Vancouver, BC)***

Registration now open online at <http://crhnet-symposium.mhrisk.ca>

Information at [www.crhnet.ca](http://www.crhnet.ca) >Annual Symposium

Hazus special session has 12 talks

Resilience Planning special session has 12 talks

Hazus users group meeting following

8 of the 9 thematic sessions deal with the topic of hazard risk.

### ***Hazus Introduction Webinars***

A one hour webinar each on the earthquake and flood modules of Hazus are available through VIMEO. Search for Hazus Canada.

### **Vignette: Marty Zaleski: Use of Hazus for earthquake loss estimation in Victoria, a thesis project**

A deck with slides showing various of the hazard scenarios is available.

Marty described the status of his thesis research project to conduct an earthquake loss-estimation model for the city of Victoria. He is doing the research out of Simon Fraser University at the Centre for Natural Hazard Research ~~and with researchers at the University of British Columbia's School of Community and Regional Planning.~~

Only the urbanized area of Victoria is considered, in part not to have to compare densely populated urban areas with sparsely populated rural areas.

Available are a detailed geology map, a microzonation soil amplification map, landslide susceptibility map and liquefaction susceptibility map. [Mapping by Levson and Monahan \(2000\)](#).

The liquefaction susceptibility map includes areas of anthropogenic fill, and we had some discussion about whether lumping fill with naturally liquefiable soil was appropriate.

Marty will consider various earthquake hazard scenarios including a Cascadia event, a Georgia Strait event and potentially a Leech River Fault event. He demonstrated various of the shake maps representing these events.

He has worked with local emergency managers of the area to gather required asset and demographic data. That engagement is useful for community "license" and overall project intent and projected outcome awareness.

## Discussion

Q: When are you coming to do this in the lower Mainland [\(facetious\)](#)?

A: Hire me when I finish my studies (paraphrased)

Q: What is the effect of the Leech River Fault?

A: The Leech River Fault goes through the south end of Victoria and lines up with faults identified in Washington State that are known to have recent motion.

Q: ~~what~~ [What](#) is your plan for local community engagement?

A: ~~have~~ [Have](#) connected [with](#) all local emergency managers. Needed them for the data and so that everything would be public.

C: If you do not have everything you need for infrastructure data, I may be able to provide some Critical Infrastructure contacts.

A: Thank you!, that would be useful. I have begun constructing a dataset based on a suite of assumptions about critical infrastructure.

C: Much of the infrastructure for Vancouver was amassed through data sharing agreements which mean they cannot be re-shared, though cities can help with the agreements. Maybe go through ISIS (have to join for a fee).

Q: Are locals aware of the shake hazard? re: water reservoir?

A: In part, though not in detail.

Q: Has the Leech River Fault been recently identified?

A: Known; though now suspected to have recent motion activity. Work in Washington State has indicated that the Leech River Fault may be active because it lines up with known active faults that cross Strait of Juan de Fuca and Puget Sound. Will speak to researchers at the Geological Survey of Canada at Sidney about their work on the Leech River Fault.

C: Marine imagery shows signs of recent activity.

Q: Liquefaction: anthropological fill is included in the map for Victoria though not for Richmond, Why?

A: I cannot comment on why anthropogenic fills are not explicitly identified in Richmond, as I have not seen those maps; I can only speculate as to why most fills are interpreted similarly across the Victoria map sheet. I suspect that The the British Columbia Geological Survey mapped them older fills and modern engineered fills together because, in general, insufficient records exist to reliably distinguish between them, and therefore it is prudent to err on the side of conservatism when making regional maps. Anthropogenic fill is most often put on top of liquefiable soil. Experience suggests that many fill deposits, particularly older and/or undocumented fills, were placed without the engineering and quality control that is typical of modern fills. They may be loose. Water content may be high, particularly within fill placed near waterbodies (i.e. around ports and marinas). Loose, water-saturated, cohesionless (granular) materials, natural or anthropogenic, are most susceptible to liquefaction. Structures on anthropogenic fill and liquefiable soils react similarly, because each substrate loses cohesion strength by collapsing volumetrically in response to shaking without dissipating pore water pressures effectively. Structures sustain damage when their foundations lose support or when the soil beneath them settles differentially. Past earthquake events (e.g. Loma Prieta, 1989) have demonstrated this phenomenon: some of the greatest damage occurred on liquefiable natural soils (Bay Muds in Oakland) and fills (Marina District in San Francisco) at relatively large distances (~80 km) from the epicentre.

*Bert Struik, September 24, 2012*