

HAZUS HOT ZONE

October 2011 Issue

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Over 150 emergency management and GIS professionals gathered in Seattle, WA for the 5th Annual Hazus Conference, held August 10-12, 2011. Conference attendees were offered an array of presentations, educational sessions, and networking opportunities. For those of you that were not able to attend, you can find the Conference Proceedings at www.hazus.net.



Opening session of the conference.

The conference included 12 educational sessions, a pre-conference training opportunity, and 29 presenters. The Hazus Conference Planning team was pleased that so many professionals were willing to participate and is appreciative of all the hard work done by this year's presenters. Many of the presenters stood out at this year's conference. However, Dr. Shane Parson, URS Corporation, gave an especially dynamic and enlightening presentation. His presentation was titled, "Update: Usage of Hazus for the Flood Risk Assessment Dataset within FEMA Risk MAP."

Dr. Parson set the context for his presentation by explaining how Risk MAP extends what was started with FEMA's Map Modernization (Map Mod) Program. Map Mod focused on turning regulatory paper flood maps into digital files. Risk MAP introduces a suite of non-regulatory products and datasets which leverage digital flood maps and the data created when developing these maps. One of those datasets is the Flood Risk Assessment (FRA) dataset that pro-

vides estimates of flood losses and is usually based on Hazus results.

Dr. Parson began his description of the FRA dataset with an explanation of the 2010 Average Annualized Loss (AAL) Study; a Level 1 nationwide analysis that predicts annual flood losses for the nation. Because of constrained analysis time and funding, the AAL study was limited by having to use nationally available data, such as USGS digital elevation models, which may not represent the best available data. Dr. Parson mentioned that he is frequently asked about the validity of the AAL studies and he feels that any modeling effort is a compromise based on model capability, analysis time, and funding and that there is always room for improvement if time and money are available. The AAL study provides the starting point for the Risk MAP FRA dataset and should be updated with refined Hazus analyses.

Dr. Parson brought this point out by taking the audience back to their childhood days using an analogy of building with Lego® blocks. The AAL study can be thought of as a simple model of a house built with a Lego® "starter set." These starter sets did not include specialty pieces such as hinged doors and clear plastic windows. So the simple houses we built as children were limited with holes for windows and doors. However, your parents could still figure out that the model you built was a house. Refined Hazus analysis can be thought off like a modern Lego® set, with lots of doors, windows, and specialty angled roof pieces. A house model made with one of these sets looks and acts much more like an actual house.

Are the Lego® houses children make today better than those we built with the most basic pieces? According to Dr. Parson, neither model is "bad" or "wrong", but are just different

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Hazus in Canada

At the 5th Annual Hazus Conference, FEMA's Hazus Program Manager, Eric Berman conducted an official signing ceremony with officials from Natural Resources Canada, which promoted the use of Hazus in Canada. This agreement, which began with discussions in 2010, will further collaborative mitigation efforts along the western North American faults. Thanks to the efforts of the Canadian Hazus User Group, Eric Berman, and Mirslav Nastev of Natural Resources Canada, this agreement will provide for adaptation of the software to incorporate the unique features of Canada and ensure that Canadian citizens will have access to the same world-class risk assessment tools that are being used across the border. FEMA also thanks the Canadian Delegation for sponsoring a reception after the ceremony to celebrate the occasion.

Hazus discussed on FOX Q13 in Seattle

While in Seattle for the conference, FEMA Regional Administrator, Ken Murphy, FEMA Hazus Program Manager Eric Berman and Mirslav Nastev from Natural Resources Canada were interviewed on FOX Q13 News in Seattle. Airing on the 5 pm news on August 11, Mr. Murphy led a discussion on several disaster preparedness and mitigation topics, including what would happen if a 9.0 magnitude earthquake were to hit Seattle and how residents should prepare for such a disaster. Mr. Berman discussed how Hazus was used to analyze the risk of flooding from the local Howard Hanson Dam so that residents could mitigate that risk. Mr. Nastev explained how his team conducted an analysis of risk assessment tools, and found FEMA's Hazus tool to be the best. "Disasters know no borders," said Nastev.

To view footage from this newscast, please visit www.hazus.net.

ways of representing something from the real world given different modeling capabilities. With additional time and resources a more advanced model can be created.

He explained how under the Risk MAP program more detailed flood mapping may be created as part of a Risk MAP project. This new mapping can be used to update portions of the AAL study with improved loss estimates based on a Level 2 analysis using a User Defined Depth Grid. The project could also leverage Hazus Level 2 analyses that a community has already performed for activities like local hazard mitigation plans.

Hazus Conference Award Winners



Eric Berman, Hazus Program Manager, and Ken Murphy, FEMA Region X Director, presenting awards.

One of the conference highlights each year is the presentation of the Hazus User Awards. Nominations are accepted throughout the year; a FEMA committee reviews the applications and then selects the individuals or organizations that have made the biggest impact on the use or promotion of Hazus during the year in several categories.

Best adaptation/use of the Earthquake model

Winner: Pacific Gas & Electric Company, Marcia McLaren, Tracey Vardas, and Stuart Nishenko

Pacific Gas & Electric Company, incorporated in California in 1905, is one of the largest combination natural gas and electric utilities in the United States. The company provides natural gas and electric service to approximately 15 million people throughout a 70,000-square-mile service area in northern and central California. PG&E has developed a Playbook Project for creating

Continuing the Lego® analogy, he explained that the simple Lego® house may only need a few of these refined pieces, rather than an entire new house, to fill in the missing pieces.

Dr. Parson finished by showing how the AAL study and Refined Hazus analysis can be meshed together into a composite analysis, which can be used to develop portions of the 3 non-regulatory products of the Flood Risk Database, Flood Risk Report, and Flood Risk Map. Dr. Parson's presentation was enlightening and comprehensive. His was one of many that made this year's conference a tremendous success.

an internal handbook to outline actions to be taken after a catastrophic earthquake. The playbook is also able to provide detailed bridge and roadway damage estimates based on earthquake scenarios.

Best adaptation/use of the Flood model

Winner: Suzanne Brunzell, Snohomish County Public Works, WA

Ms. Brunzell is a Principal GIS Analyst at Snohomish County Public Works, with over twelve years of GIS and remote sensing experience. She received her Bachelor of Science degree in Resource Ecology and Management and Masters of Engineering in Geographic Information Systems and Remote Sensing from the University of Michigan.

Ms. Brunzell has been instrumental in educating and training county staff on the benefits of a Level 2 Hazus Flood Model. Snohomish County is fortunate to have available a robust amount of data to support a solid Hazus model such as quality assessor data and in-house hydrologic and hydraulic (H&H) modeling capabilities.

Best adaptation/use of the Hurricane model

Winner: Jamie Rhome, National Hurricane Center

This year's Best Use of the Hurricane Model goes to the National Hurricane Center and Jamie Rhome. Mr. Rhome is the storm surge development and application lead at the National Hurricane Center. He has been instrumental in his work with FEMA to coordinate the integration of the Sea, Lake and Overland Surges from Hurricanes (SLOSH) model, with the Hazus Hurricane model. Without Mr. Rhome's assistance, the new Coastal Storm Surge capability in Hazus-MH 2.0 would not have been possible.

Best overall adaptation/use of the Hazus model

Winner: James Mawby, Dewberry

James Mawby is a Certified Floodplain Manager and Project Geographer with Dewberry in Fairfax, Virginia. Mr. Mawby graduated from The Richard Stockton College of NJ in 1998 with a B.S. in Environmental Studies and has been involved in GIS and GIS-based H&H since 1999. Currently, Mr. Mawby is the service line project lead and analyst for Hazus related activities within Dewberry supporting a variety of risk assessment and related projects.

Best adaptation/use of Hazus in education

Winner: Kevin Mickey, The Polis Center

Kevin Mickey is Director of Professional Education for The Polis Center at Indiana University Purdue University Indianapolis, an Adjunct Assistant Professor at the Loma Linda University School of Public Health Department of

Environmental Engineering, and an Adjunct Instructor in the Department of Geography at Indiana University Purdue University Indianapolis. He provides Hazus education at locations across the United States and is a senior instructor at the National Emergency Training Center/Emergency Management Institute in Emmitsburg, Maryland. In addition he chairs the Central Hazus Users Group, which supports the needs of Hazus users and beneficiaries in FEMA Region V.

Best adaptation/use of Hazus internationally

Winner: Nicky Hastings, Risk Assessment Activity Lead, Natural Resources Canada

Nicky Hastings has a background in biochemistry, geography, and GIS with a degree from the University of British Columbia. She joined Natural Resources Canada in the late 1990s as a GIS analyst and later joined the Risk Assessment Project in 2004 as the lead in the first implementation of Hazus in a case study in Southwest British Columbia. In 2009, she was selected as the lead for a new quantitative risk assessment methods project and is currently the project lead for adapting Hazus for use in Canada.



Nicky Hastings accepting her International Hazus Award.

Follow Hazus through Social Media

The Hazus Outreach Team used social media to spread the word about the Hazus Conference and its related activities. Two Facebook pages and two Twitter threads as well as LinkedIn were used specifically for the Hazus Conference. Social media proved so effective, the Hazus Outreach Team is planning to continue to use social media for all Hazus activities including training, HUGs and version releases.

You can follow USEHAZUS on Facebook or Twitter by searching for Hazus. Use the hash tag #hazus when posting about Hazus so others can find you. Also, join the conversation on the Hazus LinkedIn Group. It has 289 members as of early September 2011! Recent conversation includes running Hazus for Hurricane Irene, following the Annual Hazus Conference remotely and the internationalization of the Hazus Flood Model.

Hazus Podcasts

Break out your headphones and listen to a session you missed at the Annual Hazus Conference. Podcasts have been created for some of the sessions from the conference.

USEHAZUS is also generating podcasts for National Hazus User Group (HUG) calls and individual HUG calls. You can find both conference sessions and HUG calls on iTunes by searching for Hazus or on USEHAZUS at <http://www.usehazus.com/hugs/podcast>. Subscribe on iTunes and you won't miss a call. Thank you to everyone who participated in the recorded conference sessions and monthly calls; they are a tremendous resource to the Hazus user community.

Annual Map Gallery

The 5th Annual Hazus Conference was the third year that the conference produced a standalone Map Gallery. Individuals and groups were encouraged to submit up to three maps. Hazus users were also encouraged to submit maps even if they were unable to attend the conference. Awards were presented in 6 categories. With digital innovation, this year's Map Gallery was new and improved. The maps were available for viewing on a looping presentation on a large monitor in the gallery room along with laminated copies of the maps that could be picked up

and examined. Instead of using written ballots this year, the conference used electronic surveys to vote on a winner for each category. The surveys were available on iPads in the map gallery room and during the networking reception. This allowed for more participation in the voting process than ever before. The electronic survey also enabled the conference staff to quickly tally the votes to determine the winner for each category. The winners are listed below and you can view the entire Map Gallery at www.hazus.net.

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Hazus User Groups (HUGs)

Vince Brown, FEMA
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Best Innovative Practice of Hazus-MH: A Guide for Command and Management during the Initial Stages of a Damaging Earthquake

Creator: Philip McCormick

Best Incorporation of a Hazus-MH Analysis into a Mitigation Plan: Population Density in Relation to the Earthquake Hazard, Pacific County, WA

Creator: Tim Triesch

Best Practice for Data Improvements to Hazus: Level 2 Flood Risk Analysis for the City of Alexandria, VA

Creator: Sean Zintel

Best Mitigation Application using Hazus-MH: Risk MAP Datasets & Products for North Elkhorn Watershed, Fayette County, KY

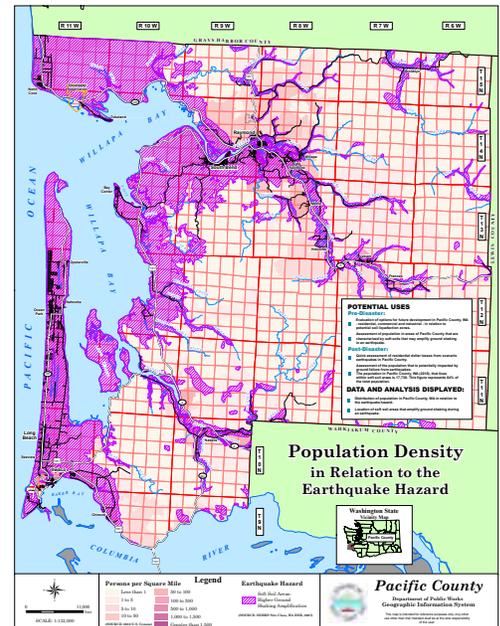
Creator: Mansai Palit

Best Multi-hazard Analysis: Hazus-MH Data Extractor Tool

Creators: Jeff Peters and Peter Ng

Best Integration of Other Tools with Hazus-MH: Hazus Analysis of a 6.7 Seattle Fault Earthquake Incorporating Updated Critical Facilities and Shake Map

Creator: Kelly S. Stone



Award winning map by Tim Triesch.