

# HAZUS HOT ZONE

June 2010 Issue

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### For Example



#### Snohomish County, WA

- Over 7,000 user defined facilities were loaded into HAZUS for the Flood Analysis.
- FEMA elevation certificates were completed for all repetitive loss properties.
- Finished floor elevations were entered for over 300 structures.
- New LIDAR data was utilized to create depth grids for Flood and Dam Failure hazards.
- Over 5,000 user defined facilities were created for the dam failure analysis.

## HAZUS Has Big Presence at National ASFPM Conference

The Association of State Floodplain Managers (ASFPM) 34th Annual National Conference was held recently in Oklahoma City, Oklahoma. The HAZUS program was represented with a strong, well-rounded presence at this year's conference. Four conference presentations focused specifically on HAZUS and FEMA hosted a highly trafficked HAZUS booth in the conference exhibit hall where as many as 1,100 conference attendees visited.

The four conference presentations demonstrated how well HAZUS works within the Risk MAP Strategy as an official part of the Risk MAP program. Risk MAP, which stands for Risk Mapping, Assessment and Planning, is a new FEMA initiative that builds on the strength of map modernization to help communities nationwide with risk assessment and mitigation planning. The program combines quality engineering with updated flood hazard data to help communities plan for and prevent risk using the best possible information. HAZUS is a natural fit.

Two of those presentations are highlighted below. Bill Bohn and Rob Flaner from Tetra Tech, EAS gave a presentation titled "Using HAZUS to

Inform the Public about Flood Risk." Their abstract follows.

### Using HAZUS to Educate the Public about Flood Risk

This presentation focused on how to blend HAZUS with good user defined data sets, such as parcel information, flood hazard mapping and FEMA elevation certificates, to build ultra accurate models of flood conditions to support the public involvement in all phases of hazard mitigation planning. This presentation illustrated the versatility of HAZUS as a public information tool. The Disaster Mitigation Act of 2000 requires local governments to engage the public through all phases of the plan's development. This includes early in the plan development process, where it is very important to gauge the public's perception of risk associated with all hazards of concern. HAZUS provides local governments a tool to present this risk in a format the public can grasp and understand, as it pertains to their individual assets at risk. This presentation will discuss actual applications of HAZUS in this role, and the effectiveness this tool provides in providing the public information about risk. HAZUS is usually viewed by the emergency management community as a highly sophisticated tool that supports planning and response. It is not usually viewed as a public information tool. Understanding the versatility of HAZUS will be very important in a "Risk MAP" era. This presentation will illustrate that versatility.

Shanna Michael from AECOM and Stefan Zink and Chad Berginnis from Michael Baker, Jr., Inc. gave a presentation titled "Mastering the Logistics of a Large Scale HAZUS Project." Their abstract follows.

## HAZUS User Study Results

(Continued from page 1)

### Mastering the Logistics of a Large Scale HAZUS Project

HAZUS is FEMA's approved risk assessment software program that provides users with loss estimations for disaster scenarios involving flood, hurricane wind or earthquake. HAZUS analyses are generally classified by their level of required effort and level of detail. Because a Level 1 analysis requires minimal input, it is a suitable method to determine flood losses on a large scale. FEMA initiated an Annualized Loss Estimation Study for every county in the contiguous states using a HAZUS MR4 Level 1 analysis.

While the manpower required to complete this effort might not be that significant, the required processing power is. BakerAECOM was tasked to conduct the analysis for FEMA Regions IV, VIII, and IX. To carry out his task an approach was chosen that involved two processing centers. These were located in different locations and different approaches were chosen for each one to optimize performance at each location. This brought along significant logistical challenges, technical issues, and eventually solutions, which are worth sharing. This presentation will focus on our best practices and lessons learned with HAZUS, and steps taken to complete the project within the designated timeframe.

For more information about Risk MAP please visit [www.fema.gov/plan/prevent/fhm](http://www.fema.gov/plan/prevent/fhm). This year's 4th Annual HAZUS Conference will feature the Risk MAP initiative.

A HAZUS User Study was developed by FEMA and distributed through the HAZUS User Groups (HUGs) between January and March 2010. The purpose of the study was to research the trends of HAZUS users. The goal of the survey was to collect information on the following topic areas:

- Who is using HAZUS?
- What is the level of effort being expended by HAZUS users?
- What challenges are being experienced by HAZUS users?
- What are the expectations for next year, 5 years from now and 10 years from now?
- What partnerships are being created to share data, share resources, and provide results?

The results of the User Study provide a glimpse into the HAZUS user community; specifically, what they do with HAZUS and how they perceive their training needs. The majority of users responding to the survey were males between the ages of 45 and 60. The respondents are an educated group, with 70% of them holding a bachelor's degree or a master's degree. They are GIS professionals or emergency managers and work for public organizations. Based on this information,

FEMA knows to tailor outreach and support of HAZUS to local and state governments and to GIS professionals.

In terms of what HAZUS is being used for, the majority of the responding professionals use HAZUS for hazard mitigation planning. Future studies may wish to inquire specifically as to whether HAZUS is used for benefit-cost analysis, general mitigation planning or project implementation. (See Figure 1)

The majority of users (68%) have created or participated in partnerships outside of their organizations to use HAZUS. The HUGs, the primary public-private partnership for the user community, were not named specifically in the user study. However, knowing that 68% of users are in a partnership and that a large number of them use HAZUS for mitigation, the HUGs may want to focus their efforts on providing technical expertise and other resources toward mitigation projects in their regions. Sharing data and resources is the primary motivation for creating or participating in partnerships around HAZUS.

According to the study, time, funding and travel are what prohibit users from taking HAZUS courses at EMI, at locations around the FEMA Regions or on the Web. In terms of future training programs, FEMA and the HAZUS project leaders will work to improve these three conditions.

The User Study was located on the USEHAZUS website and took approximately five minutes to complete. HAZUS users were made aware of the User Study via email announcements and conference calls. Using the web and electronic communication proved to be a cost effective and relatively simple method for gathering information from the user community.

### What types of plans does your organization use HAZUS for?

- Mitigation
- Preparedness
- Response and Recovery
- We don't run HAZUS for planning

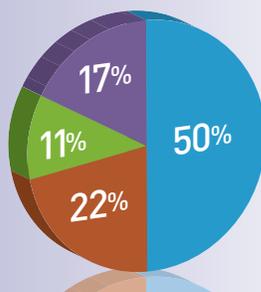


Figure 1. Pie Chart Showing Results from Question 17

## 4th Annual HAZUS Conference Back Home Again in Indiana!

Since 1946, it's been an annual tradition to play the song, "Back Home Again in Indiana" at the Indy 500 Race and FEMA Mitigation held its first geospatial conference back in 2005 in Indiana, so—we're going back home again to Indiana!

The 4th Annual HAZUS Conference will be held August 23-25, 2010 at the Indiana Government Center Complex (South Building) in Indianapolis, Indiana. Attendees can choose from a mix of eight technical and non-technical breakout sessions throughout the conference including a session on how the HAZUS earthquake model was implemented in the aftermath of Haiti to provide support to future rebuilding and mitigation efforts.

Last year's conference was themed around Risk MAP and this year's programming will again closely align with FEMA's Risk MAP initiative. The goal of Risk MAP is to make flood insurance rate maps more intelligent and HAZUS is the primary risk assessment tool for Risk MAP within this initiative. Risk MAP will dramatically expand the number of risk analyses being conducted in local communities throughout the nation.

The event began in 2007 and is going strong as the premier risk assessment conference in the nation. You will experience 2 ½ days of educational sessions, hands on training and one-of-a-kind networking opportunities with GIS specialists, emergency managers, geologists, state/local planners and others.

To register visit: [www.hausus.net/2010](http://www.hausus.net/2010).  
Registration for the conference is FREE!

For the latest conference information including the schedule, speaker bios and things to do in Indianapolis visit [www.hausus.net](http://www.hausus.net).



### What 2009 attendees are saying about the conference:

"The HAZUS Conference was the single best place to meet other HAZUS users and to learn how risk assessments are being conducted around the nation. I was amazed to see the depth of research and science used in HAZUS applications for emergency management," said Melissa Berry, Risk Assessment Coordinator for the South Carolina Emergency Management Division.

### Hotel Information

Please mention the **FEMA HAZUS Conference** to receive the government rate of \$94, when making reservations by phone. To ensure availability, reservations should be made on or before **July 22, 2010**.

**Fairfield Inn and Suites** (0.2 mi)  
[www.marriott.com/indfd](http://www.marriott.com/indfd)  
**Group Code: FEMFEMA (double); FEMFEMB (king)**

**Residence Inn on the Canal** (0.3 mi)  
[www.marriott.com/indri](http://www.marriott.com/indri)  
**Group Code: FHCFHCA**

**Courtyard at the Capitol** (0.4 mi)  
[www.marriott.com/indcd](http://www.marriott.com/indcd)  
**Group Code: FEMFEMA (king); FEMFEMB (double)**

**Other Hotels in the Area:**  
Sheraton City Centre Hotel  
Embassy Suites Indianapolis Downtown  
The Westin Indianapolis  
Hilton Indianapolis  
Crowne Plaza at Historic Union Station

## HAZUS Training Workshops

**AUGUST, 23RD  
9AM-11AM**

### "Basic HAZUS"

**TRAINER: KEVIN MICKEY, GISP**

This course will be offered at the Government Center South Building just before the start of the official HAZUS Conference. It will provide participants with an introduction to the capabilities that HAZUS offers for helping communities understand the social and economic risks that they face from earthquake, flood, and hurricane hazards. This course will be taught in a lecture format open to 100 people.

**August 25th - 2PM-5PM**

### "Comprehensive Data Management for HAZUS"

**TRAINER: KEVIN MICKEY, GISP**

This workshop will be conducted just after the close of the official HAZUS Conference. The three-hour course will include an overview of HAZUS inventory requirements and hands-on experience exploring the Comprehensive Data Management System tools created by FEMA for integrating local building, utility, transportation, and other data into the HAZUS databases. Only 12 seats are available. Please be advised, this is a workshop that will be held offsite at the Polis Center. Transportation will be provided.

### Registration

Registration is on a first-come, first-serve basis. If you would like to register for either course, please contact Rebecca Blankenship at [meetings@opp-llc.com](mailto:meetings@opp-llc.com). Please indicate which course you are registering for in the subject line. Details will be forthcoming.

*Kevin Mickey is the Director of Professional Education and Outreach at the Polis Center. The Polis Center is located at 1200 Waterway Boulevard in Indianapolis, Indiana 46202. Kevin can be reached at 317-278-2582 or at [kmickey@iupui.edu](mailto:kmickey@iupui.edu).*

## HAZUS User Group Update

On April 29, the Florida HAZUS User Group (FLHUG) held its first lunch-and-learn meeting to facilitate the interaction of group members between regular HUG meetings. The event was facilitated via a Web meeting hosted by the Florida Division of Emergency Management. The call included three representatives from the public and private sectors and each provided approximately a 20-minute presentation of a recent HAZUS activity.

After an overview by FLHUG leadership on current activities, the first of the three speakers, Darrin Punchard of AECOM, discussed with the group how HAZUS was used to help the City of Savannah, Georgia, conduct a detailed flood risk assessment as part of a new flood hazard mitigation plan. **A key take away from this presentation was that HAZUS can be a useful tool to help local communities maximize possible credit points awarded through the NFIP's Community Rating System (CRS), particularly in Activity 510, to improve their CRS classification and earn reduced flood insurance premiums for their residents.**

Following the first presentation, Eric Coughlin of PBS&J and the North Carolina HAZUS User Group leader gave an in-depth look at how recently developed DFIRM depth grids were used to estimate flood losses for counties in Georgia. **Notably, many economic indicators were studied, such as losses to agriculture that are not typically utilized but that can assist local governments in using these new modernized maps and data to help reduce flood risk from a more comprehensive perspective.** Eric showed how direct physical damages, social impacts and direct economic losses resulting from a 1-percent-annual-chance riverine flood event can be more precise when using DFIRM data inside of HAZUS.

Lastly, Richard Butgereit from Florida's Division of Emergency Management re-educated the group on the CDMS Web portal. Richard walked the participants through some of the common activities performed through the portal and why these activities help to centralize and organize essential facility data that locals maintain. **The group was encouraged to work with local points of contact and the State to get their data updated in the portal prior to hurricane season.**



The current plan is for these lunch-and-learn sessions to continue on a monthly basis from noon to 1 p.m. ET on the last Thursday of each month. The integration of public and private-sector presentations in easy-to-digest sessions should help foster communication when there would otherwise be lags. Future sessions will likely be opened to and facilitated for a national audience to pull in other uses of the tool and to encourage broader collaboration.

*For further information on these sessions or if you are interested in being a presenter, please contact FLHUG President Chris Zambito ([czambito@dewberry.com](mailto:czambito@dewberry.com)) or Jamie Caplan ([jamie@jamiecaplan.com](mailto:jamie@jamiecaplan.com)).*

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