

HAZUS HOT ZONE

April 2010 Issue

In This Issue

Indiana and Illinois Inventory Update Strategies

Mark Your Calendar:
4th Annual
HAZUS Conference

Training Opportunities:
at ESRI, Online, and
Emergency Management
Institute

HAZUS User Group Updates:
Success Story
User of the Year
HAZUS Technical
Compendium Series

Development Updates:
Surge Model
Help Desk Information

Indiana and Illinois Inventory Update Strategies

In response to the hazard mitigation planning requirement set forth in the Disaster Mitigation Act of 2000, the Mitigation and Recovery Branch of the Indiana Department of Homeland Security solicited The Polis Center of Indiana University-Purdue University Indianapolis to develop a process to assist counties and municipalities in the creation of their multi-hazard mitigation plans. The innovative planning process developed by The Polis Center has proven to be highly effective and efficient in producing community tailored hazard mitigation plans for more than 70 counties in Indiana.

The Polis Center is currently working with the Department of Geology at Southern Illinois University, Carbondale (SIUC) to facilitate a knowledge transfer of their hazard mitigation planning process and disaster modeling expertise. The Polis Center and SIUC are currently collaborating to develop community tailored hazard mitigation plans in 31 Illinois counties. The goal of this collaboration is not only to produce high quality hazard mitigation plans, but to enhance the hazard planning and modeling resources at SIUC to enable them to become a resource in the state of Illinois. The following map (see page 2) identifies the counties in which hazard mitigation plans have been completed or are currently being developed.

At the core of The Polis Center's hazard mitigation planning process is the hazard risk assessment. To obtain local geospatial data for this assessment it is necessary to secure the participation of the county or local GIS coordinator who provides these data (e.g., point addresses, parcels and additional basemap

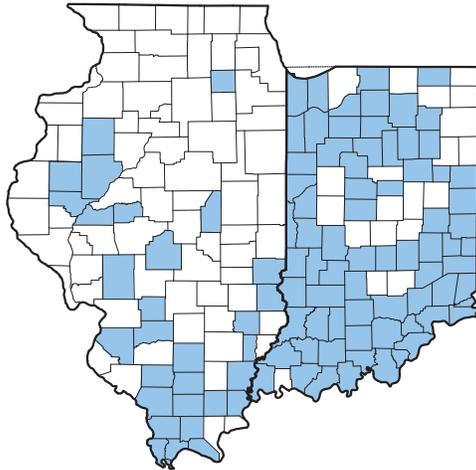
layers). In order to create realistic hazard/disaster scenarios, local and state experts are consulted (e.g., the state geologist or local floodplain manager). Then the local geospatial data and expert input are combined with a powerful GIS-based loss estimation model, HAZUS-MH to quantify potential losses which help the communities prioritize their mitigation strategies. In Indiana, detailed building data including occupancy classes and building replacement costs is provided by the Indiana Department of Local Government and Finance (IDLGF). Each county provides an extract to IDLGF annually.

Another aspect of The Polis Center's hazard mitigation planning process is the update of essential facility data. Much of the current state and Federal government critical infrastructure data is out-of-date and inaccurate. For Indiana and Illinois, HAZUS-MH critical infrastructure mapping updates are currently being performed as part of the hazard mitigation planning process. These updates consist of local expert review of the location of the facility and key HAZUS-MH attributes, along with visual inspection by GIS technicians using high-resolution aerial photography. This work not only benefits the local communities who receive the data upon completion of the plan, but the data is also provided to the Indiana Department of Homeland Security (IDHS) and Illinois Emergency Management Agency (IEMA) to update their databases. In addition, some of these data have been provided to FEMA for special studies, such as the New Madrid Seismic Zone Catastrophic Earthquake Planning Program.

(Continue on next page)

The Polis Center is working with the Indiana Geographic Information Council (IGIC), the U.S. Geological Survey, and local governments to test new workflows to integrate the local county data into a statewide dataset (geodatabase format). The workflows will allow local government data stewards with little or no GIS experience to easily update/maintain this information. The resulting data will be available for ongoing emergency management activities including HAZUS-MH analyses. Essential facilities data (e.g., school, emergency operations centers, medical care facility, and police and fire station locations) will also be disseminated through the Indiana Map to The National Map and other potential end-users.

For information about these projects, contact John Buechler at jobuechl@iupui.edu or 317.278.2433.



Counties With PDM Grant

States of Illinois and Indiana.



Mark Your Calendar: The 4th Annual HAZUS Conference is Just around the Corner

You are invited to attend the **FEMA 4th Annual HAZUS Conference**: “Back Home Again in Indiana”. The conference will be held at the **Indiana Government Center Complex (South Building) in Indianapolis, Indiana, August 23-25, 2010.**

“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,” says Melissa Berry, risk assessment coordinator for the South Carolina Emergency Management Division.

You will benefit from 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 the like. This annual event began in 2007 and is going strong as a risk assessment conference.

Conference programming will closely align with FEMA’s Risk MAP (Mapping, Assessment and Planning) Strategy which will help increase the number of risk analyses being conducted in local communities throughout the nation. The goal of Risk MAP is to make Flood Insurance Rate Maps more “intelligent,” especially from a risk communication perspective. HAZUS-MH is a primary risk assessment tool for this initiative. Risk MAP will help dramatically expand the number of risk analyses being conducted in local communities throughout the nation.

Registration for the conference is free. To register, visit www.HAZUS.net/2010.

For more information about HAZUS-MH, visit: www.fema.gov/plan/prevent/hausus.

For more information about Risk MAP, visit: <http://www.fema.gov/plan/ffmm>.

If you have any questions about this upcoming event, please contact Rebecca Blankenship at 1-888-677-0101 Ext. 706 or meetings@opp-inc.com.

Call for Speakers

The 4th Annual HAZUS Conference: “Back Home Again in Indiana” staff is encouraging potential speakers to submit abstracts. The program committee will evaluate papers based on quality and relevance.

Suggested topics include but are not limited to:

- Best Practices using HAZUS for Mitigation Planning
- Best Practices using HAZUS for Emergency Management
- Best Practices using HAZUS for Floodplain Management
- Best Practices Using the Earthquake, Wind and Flood Models in your Community
- CDMS and HAZUS-MH Data Collection
- Updates from HAZUS User Groups (HUGs)
- Innovative Approaches to Decision Making
- Best Practices using HAZUS Internationally

Deadline for submissions is April 30, 2010. Please limit the word count for the submission to 500 words or less.

Submit abstracts to Rebecca Blankenship at meetings@opp-inc.com.

Training Opportunities at ESRI, Online, and in the Regions

New and Improved Courses

ESRI: Training Courses

These courses are all self-study (via their virtual campus) and are therefore offered year-round.

<http://training.esri.com/gateway/>

Online Courses: Multi-hazard Risk Assessment

These courses are available and may be scheduled by request.

<http://www.buildingsmartalliance.org/index.php/hazus/training/>

EMI Courses

E170 HAZUS-MH for Hurricane

February 7-10, 2011

E172 HAZUS-MH for Flood

July 26-29, 2010

January 3-6, 2011

July 11-14, 2011

E174 HAZUS-MH for Earthquake

April 19-22, 2010

April 25-28, 2011

E179 Application of HAZUS-MH for Disaster Operations

February 14-17, 2011

E190 ArcGIS for Emergency Managers

November 1-4, 2010 March 14-17, 2011

E296 Application of HAZUS-MH for Risk Assessment

August 2-5, 2010

September 12-14, 2011

E313 Basic HAZUS-MH

May 17-20, 2010

July 12-15, 2010

October 11-14, 2010

January 17-20, 2011

September 19-22, 2011

E317 Comprehensive Data Management for HAZUS-MH

September 13-16, 2010

February 28-March 3, 2011

Congratulations to our new HAZUS Trained Professional and Practitioners! To learn more about the HAZUS Curriculum, please visit http://www.fema.gov/plan/prevent/hazus/hz_training09.shtm.

New HAZUS Trained Professionals

Robert Ammons, Jefferson County
Emergency Management Agency, AL

Elizabeth Barton, Maine Emergency
Management Agency

Patricia Bowman, Santa Rosa County, FL

Ramon Campos, Fort Worth, TX
Office of Emergency Management

William Goettlicher,
U.S. Bureau of Reclamation

Rich Hamilton, Town of Hilton Head, SC

Katherine Hurley (Kitty),
Hennepin Co Emergency Preparedness

Allen W. Knipher, Jefferson County
Emergency Management Agency, AL

Miguel A. Lopez, Municipality of Ponce, PR

Kyle Ness, URS Corporation

Ronda Oberlin, Lansing Fire Department

Matt Rummel,
Christopher B. Buke Engineering, Inc.

Tracy Toutant,
National Geospatial-Intel Agency

Jamie Tyson, Watershed Concepts,
AECOM Water

New HAZUS Trained Practitioners

Patricia Bowman, Santa Rosa County, FL

Kyle Ness, URS Corporation

Tracy Toutant,
National Geospatial-Intel Agency



HAZUS User Group Updates

The HAZUS User Groups (HUGs) continue to be the primary place for HAZUS users to interact with each other and with FEMA. The national HUG conference calls held in January and February provided valuable information to all who participated. The January HUG leadership call featured updates from seven of the 10 FEMA regions. Of particular note, Ed Leachman from Arkansas Tech University reported that he has a class of approximately 30 students who are taking advantage of all of the ESRI Web-based HAZUS courses. Kevin Mickey reported that the **Central HAZUS User Group (CHUG)** is thrilled that the 4th Annual HAZUS Conference will be held in their region. The CHUG plans to hold a region-specific meeting at the conference; they are also using the conference as a way to entice new HUG members and HAZUS supporters to become involved in the CHUG.

The February HUG leadership call featured updates from six of the FEMA regions. Melis Mull from FEMA Headquarters joined this call. She works primarily with the Risk MAP Strategy at FEMA and has joined the HUG team. Larry Voice reported that a new HUG will be coming online in the New Mexico area. Chris Zambito reported that the **Florida Emergency Preparedness Association (FEPA)** Annual Meeting was held February 2-4, 2010 in Daytona Beach, Florida, and the theme was "All Hazards, All the Time with HUG participation." The conference committee members are currently brainstorming on what sort of training to conduct next year. Overall, this year's meeting was a success.

The topic-specific call in January featured Tom Durham from PBS&J discussing how GeoConOps supports emergency management, the **National Response Framework (NRF)** and **Emergency Support Function (ESF)** activities. The GeoConOps community consists of several Federal and nonprofit agencies that benefit

from geospatial technology during the preparedness, response and recovery phases of emergency management. During a time of disaster, governmental entities can make use of geospatial tools and technology, including HAZUS which was identified as a "best practice" following Hurricane Katrina. A standardized process for utilizing HAZUS to support disaster operations was developed. Level 1 HAZUS runs were standardized and the guidelines were provided for future use. The first two years of the GeoConOps best practices utilization will be focused on Federal management agencies. Three phases have been identified:

- **Phase One: What can happen at the federal level?**
- **Phase Two: New Madrid Zone**
- **Phase Three: Man-made Hazards**

In conjunction with the GeoConOps information, a discussion of the national-level exercise as well as contracts to conduct and manage the exercise was initialized. It was determined that contractors will identify models and collect and analyze data. There are critical user requirements such as application and planning elements for the national exercise. Twenty-seven people from throughout the country participated in the call which developed into an interactive discussion with Mr. Durham.

The February topic-specific call featured Doug Bausch from FEMA Region VIII presenting how he used HAZUS to analyze the earthquake in Haiti. Mr. Bausch used a PowerPoint presentation to walk the audience through his process of using HAZUS in Haiti. This presentation is available at <http://www.usehazus.com/worldhug>.

Running HAZUS in a virtual environment has been the topic of significant discussion on recent conference calls and on the USEHAZUS Forum. Cathy Walker, the leader of the **Washington HUG** is the author of the first HAZUS Compendium article, which happens to feature her use of HAZUS in the Windows 7 Virtual Environment. J. Collins from Arkansas Tech University is the leader of the Forum thread regarding HAZUS in a virtual environment. He recently posted that he is running HAZUS-MH MR4 on 30 virtual machines.

Success Story

Eagle, Alaska Uses HAZUS to Map Safe Rebuilding Zones Following Ice Jam Devastation

A new success story has just been published featuring work done by FEMA Region X in Eagle, Alaska. The complete story can be found on the HAZUS Web sites. Below is a synopsis:

In early May 2009, an ice jam on the Yukon River above Eagle, Alaska broke, flooding the town with icebergs as large as homes. The town was devastated. Houses were pushed off their foundations and the icy floodwaters carried away vehicles, homes and personal

(Continue on next page)

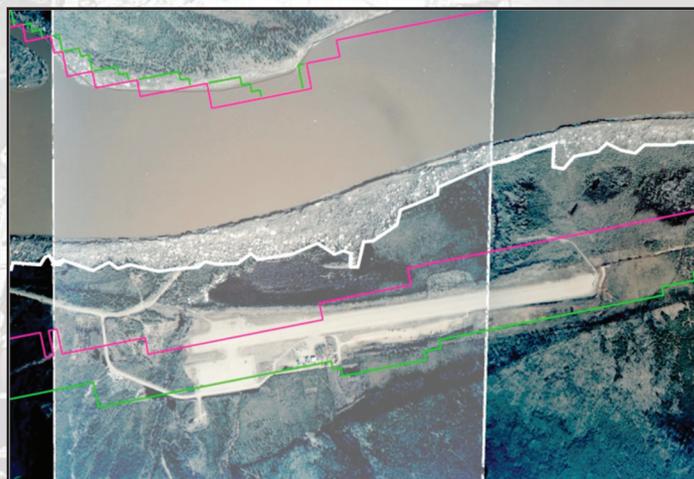


Figure 1. Acceptable levels of risk from ice jam flooding.

belongings. Fish wheels, boats, nets and other means of livelihood were crushed beneath the weight of moving ice.

The **Geospatial Intelligence Unit (GIU)** and the Risk Analysis Branch at FEMA Region X watched news reports of the Eagle disaster on CNN and came to the town's aid with HAZUS. Using U.S. Geological Survey stream gauge data and elevation data from across the border in Canada, the team was able to run the HAZUS flood model.

The GIU team created several maps to illustrate to business owners and homeowners the safe zones for rebuilding. The bright white line on the photograph in Figure 1 represents the extent of ice movement on the Yukon River in Eagle in early May 2009.

The use of HAZUS made it possible to specifically illustrate that rebuilding in the 100- and 500-year flood zones puts property at risk for flooding. Since HAZUS also generates a base flood elevation (BFE), residents who rebuilt in these zones had a guide for how high to elevate their structures to minimize the chances of future flooding. Of course, this is no substitute for a full mapping and assessment effort. But when decisions become timely, HAZUS offers a way to provide data that can lead to better outcomes.

User of the Year

Congratulations to Shelby Hudson, GIS specialist at AMEC Earth and Environmental, the 2010 1st Quarter HAZUS User of the Year. Ms. Hudson's use of HAZUS in support of state and local hazard mitigation plan risk assessments in Missouri, Mississippi, South Dakota, Kansas, Colorado, California, Nevada and Virginia sets her apart from the average user. She has worked on two statewide HAZUS flood risk assessments for Missouri and Mississippi. In the 2010 update to the Missouri State Hazard Mitigation Plan, Ms. Hudson led an effort to improve previous HAZUS Level 1 flood analyses by integrating depth grids developed from the DFIRM

process for 24 counties. The improved maps and analyses will be made available to local governments in Missouri for integration into their local hazard mitigation plans. Ms. Hudson has also performed Level 2 flood hazard analyses for mitigation plans covering Jefferson County, Colorado; Poquoson, Virginia; and Wyandotte County, Kansas.

Ms. Hudson has been an enthusiastic promoter of HAZUS since she began using it in 2007, and has shared her knowledge and skills with other AMEC staff and HAZUS users. She has presented her HAZUS project experience at the 2008 and 2009 Annual HAZUS User Conferences. Ms. Hudson is currently working to develop an internal HAZUS training program for AMEC staff and is also assisting with an internal research and development program related to HAZUS.

Ms. Hudson is also spearheading a new HAZUS User Group, the **Rocky Mountain HUG**, which covers seven states in the Rocky Mountain region. The Rocky Mountain HUG had its inaugural conference call in February 2010. Ms. Hudson is actively soliciting members and discussion topics for the HUG meetings. In addition, Ms. Hudson is pursuing her HAZUS Practitioner certification.

Ms. Hudson's expertise in using HAZUS makes her an outstanding HAZUS champion. FEMA is proud to recognize Ms. Hudson as the 2010 1st Quarter HAZUS User of the Year.



Shelby Hudson, User of the Year

HAZUS Technical Compendium Series

Running HAZUS on Windows 7 Virtual PC Mode

FEMA's HAZUS Outreach Team has recently begun collecting and publishing brief articles related to using HAZUS. These articles will populate a compendium on the fema.gov web site. The first article was submitted by Cathy Walker, GIS analyst with the Washington State Military Department and Washington HAZUS User Group leader. A brief synopsis of this article is below. For the complete article, please visit one of the HAZUS Web sites.

Washington State's Emergency Operations Center (EOC) has a workstation dedicated to HAZUS. The EOC computer systems were upgraded to Dell workstations running Windows 7 Professional (32-bit). HAZUS-MH MR4 is not known to operate successfully in the Windows 7 environment; this PC upgrade initially posed a problem for continuing to use HAZUS in the EOC.

Looking into the options that are available with Windows 7, the Windows Virtual PC function that allows for older Windows XP tested software to run on Windows 7 in a Virtual XP environment seemed to be the best option for continuing to use HAZUS on the newly upgraded EOC computers. The requirements for the Windows Virtual PC software specify that it is only an option for computers that are running the Professional or Ultimate editions of the Windows 7 operating system. Fortunately, the new EOC computers met the standards for virtualization using Windows Virtual PC, so it was decided that the Virtual XP option would be used to run HAZUS-MH MR4 in the EOC. The total installation from virtualization to installation of the ArcGIS Desktop and HAZUS/CDMS software took about five hours to complete but resulted in a fully functional instance of HAZUS-MH MR4 and CDMS 2.5 running on a Windows 7 computer.

Development Update

Surge Model

The HAZUS-MH Surge model is currently being developed and completed portions of the model are now undergoing beta testing. The fully developed Surge model will be available for HAZUS users in 2011.

Help Desk Information

The new HAZUS Help Desk website will be online soon! And with the new system will come significant improvements in the technical support you can expect to receive. To start using the new system, HAZUS users can call the technical hotline, 1-877-283-8789 or e-mail helpdesk@support.hazus.us to receive a user name and login. Then he or she will have access to the Help Desk website www.support.hazus.us to submit requests for support, search for solutions in the repository and sign up to receive automatic notifications when information related to specific interests is updated. Users will have access to technical assistance 24/7.

HAZUS-MH Users Now Have Four Choices for Technical Support

HAZUS-MH Help Desk

Open a request through www.support.hazus.us.

HAZUS-MH Help Desk Solution Repository

Check out the Solution Repository at www.support.hazus.us for frequently asked questions and solutions.

Send an Email

Users can submit a question at www.support.hazus.us.

Call the Hotline

You can still submit a question at 1-877-283-8789. Those questions will be added to the Help Desk requests and you will be able to check online for updates and solutions.

Contact Information

HAZUS Program Manager

Eric Berman, FEMA
eric.berman@dhs.gov

HAZUS Outreach

Vincent Brown, FEMA
vincent.brown@dhs.gov

Beth Miller Howser, PBS&J
bmhowser@pbsj.com

Jamie Caplan, Jamie Caplan Consulting, LLC
jamie@jamiecaplan.com

HAZUS Training

Vincent Brown, FEMA
vincent.brown@dhs.gov

HAZUS Development

Mourad Bouhaf, PBS&J
mbouhaf@pbsj.com

HAZUS® and HAZUS-MH® are trademarks of the Federal Emergency Management Agency.

