

## In this Issue

**Hazus at the 2015 EERI Annual Meeting**

**Hazus Earthquake Testing in Utah**

**Hazus Conference 2015**

**Hazus Modernization**

## Upcoming Calls

### User Group calls:

May 13

June 10

July 8

August 11

September 8

Get more information regarding the User Group calls by signing up for [GovDelivery](#) emails.

## Hazus Team Attends the 2015 Earthquake Engineering Research Institute Annual Meeting

This year's Earthquake Engineering Research Institute (EERI) Annual Meeting took place in Boston, MA from March 31<sup>st</sup> – April 2<sup>nd</sup> and a number of Hazus Outreach Team members attended. The meeting is put on annually by the EERI nonprofit technical society, whose members include engineers, architects, government officials, and academics. Held in the northeast for the first time in the institution's history, the 2015 Annual Meeting was also unique in its focus on earthquake hazard risk outside of traditional "earthquake country." Many sessions focused on seismic risk in parts of the Central and Eastern United States, which traditionally get less attention than the Western United States.

Exhibitors at the conference were presented with the opportunity to display their products and services to EERI attendees between lectures and educational sessions. For Hazus, this was an opportunity to reacquaint with past and present users of the Hazus software, particularly the earthquake module. Members of the organization and guest attendants came from varying backgrounds: geospatial departments at universities around the world, local, state, and federal government agencies, engineering and architecture consulting firms, and general GIS or disaster mapping enthusiasts. The EERI meeting also brought in a number of potential new Hazus users from engineering and geospatial graduate and undergraduate programs around the world. Nearly 200 students participated in EERI's Seismic Design Competition, which saw students design balsa wood structures and test them against a number of seismic stress tests.

The students were eager during exhibition hours to learn about the Hazus methodology. Ongoing research projects at



*EERI lectures took place throughout the conference at the downtown Boston Park Plaza.*

their universities require the use of loss estimation tools, but many departments at smaller universities may not have the software subscriptions to carry out the types of assessments that students require. Hazus represented a new opportunity for many of these students to use a free tool with easily compatible modules that can overlay with their existing data sets.

*Eric Berman, Hazus Program Manager for the Federal Emergency Management Agency (FEMA) found great value in having a Hazus presence at EERI. "It was great to re-engage Hazus with the earthquake community and see how many strong supporters are out there."*

Overall, the EERI Annual Meeting was a great opportunity for Hazus and the Outreach Team to continue collecting the needs of the Hazus and earthquake communities. For more information on EERI, visit their [organization's website](#).



## Upcoming Courses

[E0317: Comprehensive Data Management for Hazus-MH](#)  
June 15-18, 2015

[E0172: Hazus-MH for Flood](#)  
July 27-30, 2015

[E0296: Application of Hazus-MH for Risk Assessment](#)  
August 3-6, 2015

Download the course schedule and enroll at the [EMI Courses Page](#)

## Contact Us

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# Hazus Earthquake Testing Reveals Important Results in Utah

Emergency managers and geospatial experts in Utah's Division of Emergency Management completed a study this past spring using the Hazus earthquake module to discover some significant details regarding the state of Utah's earthquake safety. Planning for and expecting the worst, emergency managers tested what a 7.0 magnitude earthquake along the Wasatch Front fault line would do to Utah's building and transportation infrastructure. While this magnitude of earthquake is very rare, it is an extremely conceivable scenario given the seismic history of this region.

The results of the Hazus study revealed what would be devastating effects to the state of Utah's buildings, transportation infrastructure, and utilities. Major population hubs such as Salt Lake City would be the most devastated, with major housing displacement, numerous landslides, the spilling of hazardous materials, and liquefaction of land near water tables. Economically speaking, the total damage and cleanup could be upwards of \$32 billion. Among major counties where the fault line would cross, nearly a quarter of all buildings would be either moderately to extensively damaged during the 7.0 quake. While buildings in the Salt Lake City area that are younger than 25 years have been reinforced for more severe earthquakes, older unreinforced masonry in the area would be the most impacted. Currently, there is no legislation in place to force home or business

## Wasatch Front fault lines



The Wasatch Front fault line is predicted to have a major catastrophic earthquake every 350 to 400 years. Since it has been exactly 350 years since the area experienced its last major activity based on the rock records, it has become prudent for the region to begin researching mitigation plans in case of an upcoming catastrophic quake.

owners to retrofit homes for earthquake protection.

Utilities along the Wasatch Fault shut down for 24 to 48 hours after major earthquakes for a running of safety evaluations. If such a quake were to hit during a harsh Utah winter, this could cause major problems for homes attempting to keep warm by other means. There could be nearly 86,000 displaced citizens in such a situation. There is a plan of action for getting the power grid back in place, yet it would be difficult to determine how long it would take.

The Utah Division of Emergency Management is already ensuring that their Hazus testing does not go to waste. The Great Utah ShakeOut is held annually to raise awareness about earthquake safety throughout the state and ensure that all public schools and buildings have proper evacuation and safety plans in place. There is also ongoing work being done to identify sources and partnerships between government and non-profit institutions for maximizing aid and shelter in major emergencies.

For more information on Utah's work in earthquake preparedness, visit the [Utah Division of Emergency Management website](#). Read more on the details of the Hazus study on the [Deseret News site](#).

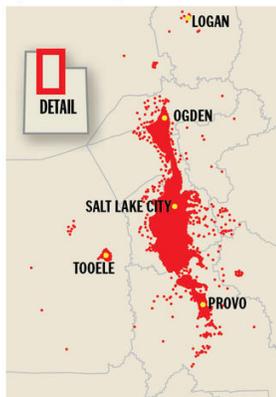
## Building and economic loss

If a 7.0 earthquake were to have an epicenter along the Salt Lake segment of the Wasatch Fault

● 1 dot = \$1 million in economic loss

Total loss from structures, contents, inventory damage, lost income, relocation costs and lost wages

| COUNTY       | TOTAL LOSS*           |
|--------------|-----------------------|
| Box Elder    | \$8.8 million         |
| Cache        | \$8.9 million         |
| Davis        | \$3.2 BILLION         |
| Juab         | \$915,000             |
| Morgan       | \$5.4 million         |
| Rich         | \$32,000              |
| Salt Lake    | \$27.5 BILLION        |
| Summit       | \$33.1 million        |
| Tooele       | \$35 million          |
| Utah         | \$761.8 million       |
| Wasatch      | \$12.4 million        |
| Weber        | \$313 million         |
| <b>Total</b> | <b>\$31.8 BILLION</b> |



SOURCE: Utah Division of Emergency Management  
DESERET NEWS GRAPHIC

## Upcoming Hazus Modernization Release

The next release for Hazus Modernization is slated to be deployed in early May 2015 and will feature several enhancements to the flood module. This will include the application of the dasymetric General Building Stock (GBS) approach and the implementation of study regions aggregation at the custom jurisdiction or neighborhood level. Later in Hazus Modernization, the

underlying code of Hazus will be re-architected to align with current practices, enabling future development.

For more information about the Modernization effort, follow the Hazus program on [Twitter](#) or [LinkedIn](#) and subscribe to [receive Hazus program updates](#), or contact the Hazus Outreach team at [hazus@arcaspicio.com](mailto:hazus@arcaspicio.com)

### Social Media

 [Follow us](#) on Twitter!  
[@HazusCommunity](#)

 [Join our Group!](#)



Scan here with your smartphone for more information

### Save the Date: Hazus Conference 2015

The 8th Annual Hazus Users Conference will take place from December 9th - 11th, 2015 in Atlanta, GA. This year's theme is "Hazus and the Emergency Management Life Cycle: From Practice to Policy." Registration will be open soon, so stay tuned for more information. Email [hazus@arcaspicio.com](mailto:hazus@arcaspicio.com) with any questions.

# HAZUS

MULTI-HAZARD LOSS ESTIMATION

# MH

### Hazus Help Desk

Hazus users can contact the Help Desk by emailing [helpdesk@support.hazus.us](mailto:helpdesk@support.hazus.us)

The help desk will provide users with a login ID and password to track the status of their inquiries on their [website](#).

For answers to common questions and other useful resources: [Hazus Help Desk Resource and Solutions Page](#).