Upcoming Calls

User Group calls:

April 12, 2016
May 10, 2016
June 14, 2016

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

Social Media

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FEMA

Visualizing Hazus Results for Interactive Web Maps
Article by Micaella Penning, Geospatial Analysis Center, University of Minnesota-Duluth

Engaging community members is often one of the biggest challenges in updating Multi-Hazard Mitigation Plans, so the Geospatial Analysis Center is experimenting with new methods to interest the public through web mapping. They are beginning to implement ArcGIS Online Story Maps, a cloud-based mapping and GIS platform by Esri, to map floodplains, historical floods, and Hazus results based on a 100-year flood.

Story maps combine mapping and analysis with multi-media content such as images, videos, text, and hyperlinks. Data layers such as the 100-year floodplain and potential economic loss by census block produced with the FEMA Hazus-MH tool are seamlessly integrated with poignant imagery from past events, in the hope that the story map will serve as a helpful tool for visually 'reminding' residents about hazards to encourage their participation in future mitigation. Data can be shown side by side in both spatial and tabular formats. The interactive format allows the user to click on a specific census block to find out exact loss estimates generated by Hazus, and then zoom in to the areas of highest concern, with the background map switching to detailed aerial imagery.

Depending on the content included, this interactive web story can be used to provide additional information such as storm and precipitation data, maps of current county mitigation projects, and information about federal and state grant funding.

Simple to create and available in a variety of templates, story maps have their own interactive builders that don't require any coding to use. Imagery can be stored in various ways, from Flickr, Picasa, and Facebook, to simple URL links. ArcGIS Online provides a large database of publicly available spatial data, which can be supplemented with the user's own data in varying formats, from shapefiles to spreadsheets. For those who want to delve further into customizing a template, there is also the option to download the source code and configure the application to their own specifications. Once the story map is complete, it can easily be shared on social media or embedded in a website, for example on a county's Emergency Management Department webpage.

While still in an experimental stage, the Geospatial Analysis Center hopes that story maps will improve community engagement in mitigation planning, by combining spatial analysis, flood modeling, and visual narrative in an easily-digestible online format.

Hazus results like the ones shown above can be incorporated into the Story Map Tool to easily zoom in and out, which allows for quick interpretation of the data based on images.

Micaella Penning is a GIS Specialist and Research Assistant at the University of Minnesota Duluth's Geospatial Analysis Center. She can be reached at [kinzl011@d.umn.edu] or [http://d.umn.edu/gac]. For further information, check out: Wright County Flood Hazards: [http://arcg.is/1HG14N6]; Scott County Flooding: [http://arcg.is/1kn1djT]; Esri Story Maps: [https://storymaps.arcgis.com/en/].

Upcoming Courses

E0313: Basic Hazus-MH
April 11-14, 2016

E0172: Hazus-MH for Flood
June 20-23, 2016

E0190: ArcGIS for Emergency Managers
July 18-21, 2016

Download the course schedule and enroll at the EMI Courses Page

Contact Us

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FEMA

What Kind of Damage Will Seattle's Big Earthquake Bring?

FEMA's Hazus software and the University of Washington Sea Grant combined forces to estimate the damage a 7.2 magnitude earthquake on the Seattle Fault would have on the Seattle metro area. The last time there was any movement of the Seattle Fault was around A.D. 900 and no one knows when the next one, the one they call "Our Big One," will strike.

FEMA's draft report assessing the risk along the Seattle Fault found that the damage and casualty estimates are dependent on the time of day an earthquake of this magnitude would strike. FEMA estimates that roughly 3,701 persons would be displaced, on top of 34,678 people that would be uprooted by the more than 100 fires that this quake would ignite. Throughout the Seattle region, roughly 30% of all buildings would sustain moderate damage resulting in about $3.6 billion in building damage costs. This figure doesn't include the damage that would be sustained to roads, bridges, and other utilities like power lines and sewer pipes.

A 7.2 magnitude earthquake, one that would come without warning, would bring a wave of turmoil and destruction all across the Seattle area unlike what the Puget Sound region has ever seen before. For more information on what research is being done regarding earthquakes in the Seattle area, check out the full article at http://data.kitsapsun.com/projects/2016/01/06/earthquake-on-the-seattle-fault/.
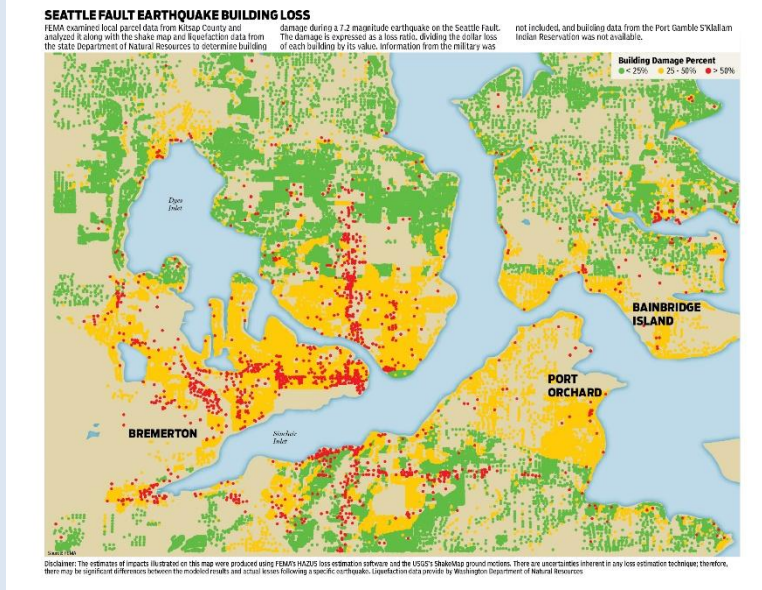
This image was produced using Hazus and estimates building loss percentages in the event of a 7.2 magnitude earthquake. As you can see, the levels of building loss beyond 25% are extremely centralized in high population regions of the city, yet the effects of the earthquake would be far-reaching.

Upcoming Release of Hazus-MH 3.1

The next Task in Hazus Modernization will focus on a number of underlying architectural changes to the Hazus code, updates to installation procedures, and additional fixes and improvements to latent defects. More information regarding this release will become available closer to the release date later in Spring 2016. For questions, please contact the Hazus Outreach Team at hazus@arcaspicio.com.

To track future updates and releases to the Hazus-MH software, the Hazus Outreach Team has created a Hazus Modernization page on fema.gov. The page serves as an FAQ for what's changed between releases, what type of documentation is available to educate yourself on these changes, and what changes are anticipated in future releases. Links are provided throughout the page to the FEMA Document Library containers that house many of these modernization and release documents.

New links have also been added to the Hazus download page on the FEMA Flood Map Service Center. These links, which appear under the Hazus Modernization and Additional Resources subsections, also connect users to release documents in the FEMA Document Library.