

## A Very Spatial Podcast - Geography...In Stereo FEMA - Hazus

Very Spatial sits down with Eric Berman of FEMA to talk about [Hazus](#) and [Risk MAP](#)

So we're joined today by Eric Berman from FEMA and he's going to talk to us a little bit about Hazus. Let's start with the basic question: What is Hazus?

Eric:

Hazus is a loss estimation methodology for natural disasters. So with FEMA we manage or work with what we call "mitigation" to help communities reduce their losses before events. And with that, we've developed an application to help assess losses and damages so that then they can plan to reduce those so you'd be able to look at that perspective and be able to reduce it before it happens. We had done some studies and found that there was an actual 4:1 ratio. For every dollar you spend on mitigation, that pays back four dollars in disaster losses. It's always helpful to get it done before. So that's we're really looking for: how can we assess it so then people would understand, is it cost/beneficial to buy that structure out, or to elevate it. And also to give that information to local communities and local officials so that they can make the decision of do I want to reduce the risk by a buyout or a grant for an elevation of the structure or some method, or a levee, or do I want to transfer that risk through an insurance?

Interviewer:

So I couldn't help but notice at the booth that there's a lot of big banners for this "Risk MAP" thing. I don't know the first thing about Risk MAP, so could you give us a bit of background on that?

Eric:

For the last, I'd say, forty years we've managed the National Flood Insurance Program (NFIP). With that, we've gone through and identified areas that were at risk for flood hazards, and we've also gone through and offered insurance to communities that participate in the National Flood Insurance Program. About five years ago we started our Map Modernization which was to take all our paper maps and put those in to a digital product. So we've done that and we really started seeing that its not so much about identifying the risk, but it's also about assessing and planning for it so we get more to that mitigation aspect of reducing that risk or giving the information so that communities can make an informed decision. The M-A-P in Risk MAP is really an acronym for Mapping, Assessment, and then Planning. To help people reduce their losses.

I think in the years we've gone through and always identified risk, through our flood insurance rate maps, and communities have seen that, but now we actually want to go through with the next step, which is do an assessment of that risk so when you provide it to the community, a community official wouldn't look at it as, 'Oh, this is just for a rating of insurance' but 'This is the economic viability of my community. Okay, I see I have this uninsured loss'. Because we can give them how much insurance they do have from flood, but then they can be able to say, 'Well, what do I want to do with that delta? That area that isn't insured. Do I want to have people buy insurance? Encourage that? Or do I want to do projects so that they can reduce it.' So it's more like this mitigation message, of a wider view of trying to look at it.

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Interviewer:

And that kind of brings us back - the A and P in Risk MAP or the conversation of Hazus - it's meant for assessment, it's meant for trying to figure out ways to mitigate. But what are some of the ways that you're getting tied in to local and regional planners? Because of course that's really where you have to get a lot of people to buy in for most of these kind of ideas to get it off the ground.

Eric:

There was reform act done in 2000, the Disaster Reform Act, that really changed things. It required all communities to have a mitigation plan, or they would get a reduction in disaster assistance. And so with that a lot of communities have done plans. So we have a large group in our office that deals just with the mitigation planning aspect. We work very closely with the American Planning Association, APA, in setting standards and workshops and doing guidelines. So we've kind of worked with that. The only thing is that we can't do the plans. Because we're actually reviewing them also. So we work very closely with giving guidance, assistance, to communities, but we can't really do the plans. But we can do the assessments, and start building up that inventory of information so that we can get that and use that so we can assist from the A side. Having tools like Hazus, so communities can take their data, bring it in to Hazus, do the assessment and then have that go right in to the plan so that would be reviewed and approved by FEMA from a hazard mitigation standpoint.

Interviewer:

Now actually people may not know this, but you actually have quite a broad community of users that are implementing Hazus and its tools. I wonder if you could talk a little bit about the community and in fact you have a conference every year to help that community get together and learn how to better utilize the tool.

Eric:

Hazus has been around for about seventeen years. It started with the Earthquake community. From academies of science report that said there should be a loss estimation methodology. It was started on a different platform, we've kind of ported it over. Over the years we've increased the different hazards that have been identified. We started out going to flood and now we're completing our hurricane model. For next year we'll actually have that complete. We have the wind portion done, we'll have the surge portion done for next year.

One of the things that was decided upon early was actually developing user's groups. We have about thirty different states around the country that have user groups who really have a robust program. So not only did we say let's have an application and send it out, but we developed a user group community, helped with seeding that, and also very robust training through the Emergency Management Institute. We also have some courses online via ESRI's virtual campus.

So with having that number of people in our user community, we do an annual conference. This year we're actually going back to Indianapolis, Indiana. About seven years ago, there was a geospatial conference. So playing along the theme of the Indianapolis 500 and the theme song of Back Home Again in Indiana, we're pulling that together. So that will be August 23 through 25th. We have over 200 registrants so far, hopefully we'll see some more, so it's very well received for the number of people who are very focused on how things are being implemented with Risk MAP, and also some of the other hazards. Risk MAP right now really is just looking

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primarily on floods, but with Hazus we also do the earthquake and hurricane risks, so we can help along with that community.

We also getting interest from other countries. Two weeks ago I was invited by the Canadian government to come and present Hazus. They had actually done an analysis of different risk assessment models all around the world, and they are looking at implementing the Hazus application. So, I'm very lucky to have that. So we're very honored that they would choose Hazus to work with on that. We're probably going to start seeing how can work with them on developing not as much of a U.S. model but more of a North American model, since we know that hazards don't stop at international boundaries.

Interviewer:

I'd want to thank Eric Berman for joining us today and talking to us about Hazus and the Risk MAP. It's a really interesting project and we were involved in my day job, with a very small bit of that. It's pretty important so if you're interested in that type of work you can contact FEMA or your local floodplain managers and find out more!

Eric:

Thank you very much.

<http://veryspatial.com/2010/08/avsp-roadshow-%E2%80%93-hazus-esriuc/>