NATURAL HAZARDS CENTER

Making Mitigation Work:
A Webinar Series

Natural Hazards Center and FEMA Webinar Series
"Making Mitigation Work"
Written Questions and Answers after the March10, 2020 Webinar
All Along the Wasatch Fault: Best Building Practices from Utah's Earthquake Mitigation Efforts

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Question from an Anonymous Attendee:
How do you do a cost-benefit analysis when there hasn't been a history of earthquake damages in a region?

Our benefit cost analysis with earthquakes we've done really well. We don't have a lot of earthquake to show the damage but what we do have is the science showing that we have the potential for earthquakes. We know where most of the faults are, but there's always the ones that you don't know that you don't have, but we know where a lot of the faults are. There's been a significant amount of study on the region as far as earthquakes, so we know what the potential is and we're able to use that in our benefit-cost analysis.

Question from an Anonymous Attendee:
What do you tell people once they learn that their home or their child's school or the place where they work about the risk of these buildings but then life goes on people have to go to work? What do you tell people once they learn of this risk if they do become deeply concerned about it which we know that many people do once they learn and come to understand it? What's your recommendation for others who are out there who are grappling with this and how do you handle that?

Like with all disasters, there's a level of risk everyone is taking when they choose where to live. It's just kind of an open conversation a lot of people in single-family homes just like well your home's not going to collapse, well your ceiling will probably not fall on top of you, and unless they live in a two-story house then it's like well you know you should be a little bit more concerned and maybe look at getting it retrofitted. As far as the schools, Salt Lake City school district is one that on their own in the 2000s they just went through and tour down all their elementary schools and rebuilt new ones, so a lot of the kids you know I feel pretty safe when my kids were attending Salt Lake City School District but other schools I talked up to them about it and really it's a funding issue. No one wants to fund retrofitting schools or building new schools when there's other things that are needed as well.

I don't want to dwell on the negative. I say, yeah, you're right this is a problem and it is serious, but I try to connect the dots and say here is what you can do about it. You say hey there's Fix the Bricks program, there's a lot of other resources that FEMA and the state provide in terms of how you can retrofit. Sometimes the retrofit is a lot cheaper than people expect it to be. That's one thing in addition like the physical protection, are you protected financially? And a lot of people don't know. Earthquake insurance usually isn't part of a homeowner's policy, and so, I always point that out and say hey you know just as you probably have flood insurance you actually need earthquake insurance to make sure that if your house is damaged- and it likely will be hopefully it's not severe if you retrofit, but there's still going to be some damage and make sure that you're able to put things back together financially as well as physically.

Question from an Anonymous Attendee:
Were there other types of building construction beyond the URMs that were found to be at risk for earthquake damage?

Because our URM inventory is so large that's where a lot of our focuses are. There's a URM there for the clear front-runner unfortunately in Utah but there's also some other standard types that are pretty dangerous like tilt up concrete, there's a non-ductile concrete, some soft story, but I think really URM are the main one and I'm hoping that once we get a foothold on that one we can begin addressing some of the other ones as well because I know there are other people at risk in other building type, so I think we're trying to make sure we can really do justice to this one which has by far the biggest risk in the state.

Question from an Anonymous Attendee:
Where do I start with preparing a hazard mitigation plan so we can apply for some funding? Do I start by contacting the county, FEMA region ten, finding the appropriate documents, etc.?

I would contact your state hazard mitigation officer otherwise known as this SHMO. They have the FEMA funding, or they have the ability to connect you into that funding pot. So, that's the first place I would start is talking to your SHMO because FEMA does have funding for those mitigation plans, so they can fund up to 75% of those. You just have to apply for the grant. The early cycle of the pre-disaster mitigation grant has gone away and is going to be replaced with a BRIC which is the Building Resilient Infrastructure and Communities, so it's basically going to be a lot like PDM hopefully with a lot more funding. That's where I would start is talking to your SHMO.

Question from an Anonymous Attendee:
What sorts of grants or programs are out there to help a state with getting access to houses and especially analyses related to houses?

Hazus is a program provided by FEMA. You can download it the cost probably comes in because it runs off of ArcGIS that's probably where the cost and prohibition come into play and we have worked closely with our universities on running analysis. All of our hazardous runs though been really closely worked on with Emergency Aids.

I think that your best bet in universities or the FEMA region if you can't handle it in-house which is totally understandable because there's a skill set and licenses to purchase that that are required for that. Some good news on that it's not in the short-term but Hazus is going open-source and so the ArcGIS license issue hopefully will go away and then also perhaps more importantly for the

immediate term they're doing a Hazus analysis atlas so like they'll pick a lot like hundreds of the most common or the most important scenarios around the country and they're going to post the results online so you can skip a lot of times in our line of work you don't care as much about the model as the results and you to show people here it's here the consequences that we expect and so that can do a lot of talking for you so to Kayla's point I think a lot of these resources will be available for free available through FEMA in the near
future.

Comments, Suggestions, or Questions for the Natural Hazard Center?
Please contact: katherine.murphy-1@colorado.edu.

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