Oklahoma Innovations Radio Show

Air Date: October 31-November 1, 2015

Guests: **Scott Hodgson**, University of Oklahoma Gaylord College of Journalism & Mass Communication

>> From the OCAST Radio Network, this is *Oklahoma Innovations*, a weekly science and technology radio magazine, brought to you as a service of OCAST, the Oklahoma Center for the Advancement of Science and Technology. OCAST is the state's only agency whose sole focus is science and technology. The OCAST mission is to identify and fund promising research and technologies that allow Oklahoma to compete in a global market economy from our own backyard. This program features some of Oklahoma's most gifted scientists, inventors, entrepreneurs, manufacturers, educators and business leaders who all have one common goal: developing technology based economic growth for all Oklahomans. Now, here are your hosts Gary Owen and Chad Mullen.

[Music]

>> **Gary Owen:** Welcome to this edition of *Oklahoma Innovations*. We have an exciting show for you this week. We're going to talk with Scott Hodgson. He is Professor at the University of Oklahoma at the Gaylord College of Journalism and Mass Communication. We're not going to be talking necessarily about his job per se but we are going to talk about the subject of earthquake mitigation preparedness. Are you prepared? You know Oklahomans are experiencing more earthquakes than I think we've ever experienced at least since I have been in Oklahoma and I have been here a long time.

>> **Chad Mullen:** Well that's certainly true, Gary, and we were talking a little bit before the show began and I am prepared for a tornado and an ice storm but that may not be completely correct for an earthquake. We'll talk about survival kits and where they're at, but it sounds like it's going to be a very exciting show. Before we get into it though I have some exciting news going on at OCAST here in a couple of weeks in Durant. We're going to be hosting our regional innovation forum and that's going to be on the campus of Southeastern Oklahoma State University in Durant where we have a great slate of speakers lined up including the lieutenant governor and several economic development folks from the area and we will be hosting that. It's an all-day event starts at 8 o'clock and registration opens at 8 o'clock in the morning and goes through the afternoon. So if you're in the area, stop by. Registration is open on our website ocast.ok.gov.

>> **Gary Owen:** Cool. We make frequent trips to the campus at OU and other campuses around the state, but this one I'm really excited about because earthquakes are topical right now among all Oklahomans concerns about are we going to get a big one and it seems like they're very frequent, of course, and there's a lot of question marks about what's causing them and we hear various reports and there's a lot of research going on as we know at the University of Oklahoma, but this gentleman has got quite a background in broadcast doing documentaries and his name is Scott Hodgson. We're going to talk to him. Scott, welcome to the microphone. You've got a, you've got quite a career here.

>> **Scott Hodgson:** Oh, well thank you. It's fun to be here and, yeah, it's been an interesting career. I never expected to get into doing disaster type media, but it just happened, you know, you kind of fall into it.

>> **Gary Owen:** Give our audience a little background on you and then I want you to talk about some of the projects you did for PBS.

>> **Scott Hodgson:** Oh, sure. I'm a producer/director by trait and got into teaching a little by accident and just happened to be invited to teach for a semester and kind of fell in love with it. I love working with students and, you know, one of the things that you do as a faculty member you either do research or creative activity and then I'm a creative kind of guy so I kind of do some of that kind of stuff. So one day we had a full effect and was doing a documentary on earthquakes. I was living in southern Illinois at the time and there's a big region up there known as the New Madrid Fault Zone. Some major earthquakes that have happened. We might talk a little bit more about that later, but he said, hey, I want to do something on what happens in an earthquake. I said, oh, yeah, great, what do you want to do?

>> **Gary Owen:** When is the next earthquake?

>> **Scott Hodgson:** Yeah, what earthquake? And he said, you know, he began talking about that and he goes what do you mean? This is the middle of the United States, there's not an earthquake, this isn't California. And he goes, no, the New Madrid Fault Zone some of the biggest earthquakes that have ever happened in the Continental United States happened in the middle here just a few miles away. In 1811-1812, there were 3 earthquakes that happened over that wintertime. They were all 7.5, 7.8, 8.0.

>> **Gary Owen:** Wow.

>> **Scott Hodgson:** Major earthquakes. Sent the Mississippi backwards, just really redid the landscape, but no one was here. It was 1811-1812, I mean there were very few. Some cellars, we had some accounts for that we know, but it did ring, even though it was on the west side of the Mississippi it rang church bells in Boston. It was that big of an event and they said they happen every once in a while. The last one was in 1895. This was a 6.5 type earthquake. They say they happen about every 125 years. Well, do the math, Gary.

>> **Gary Owen:** We're real close.

>> **Scott Hodgson:** They say kind of within this generation good chances are we will see a major earthquake here in the Midwest.

>> **Chad Mullen:** And so, Scott, what that means for Oklahomans is that even though the epicenter of that may be a few hundred miles away the magnitude quake that would shake Oklahoma from that would still be very significant, right?

>> **Scott Hodgson:** From that point, yes, they take a look at it they say one of the places that's going to be impacted in particular is going to be eastern Oklahoma. Now, because no one lived in eastern Oklahoma back in 1811, at least we had a Native American population but we don't have a lot of historical records from them or that we can actually rebuild what happened during that time, we're really not sure, but then there's other fault zones that have come up and other things that we're looking at to say, hey, there may be other faults that we have to worry about and other things. I have heard there are more earthquakes here in Oklahoma. You guys know about that.

>> **Chad Mullen:** Just a few, just a few happening.

>> **Scott Hodgson:** And so the question is what's going to happen in the future? And to be honest with you we don't know but there's reports and things out there that said, yeah, we could experience a major earthquake, something of a greater magnitude because we've had 4s, we've had 5s here is that leading towards a 6, a 6.5, a 7? And to be honest with you we're not sure but there's enough speculation out there to go well we need to be prepared.

>> **Chad Mullen:** Well, Scott, we've certainly seen at least, you know, maybe a little bit in California but certainly in places like Chile and Nepal where there have been large magnitude earthquakes that the, their range of damage goes for hundreds of miles? Or it's not a very isolated area. So I think we talk about earthquakes in Oklahoma a lot but earthquakes really anywhere in the United States could have a large enough one could have a significant impact on Oklahoma. Is that right?

>> **Scott Hodgson:** Yeah, and your geology differs. I mean in California and Nepal you have major mountains and in many ways because earthquakes travels in waves, you know, they don't maybe travel as long of a distance. In the Midwest because some of the soil content, you get a little bit longer travel.

>> **Gary Owen:** Yes, you do.

>> **Scott Hodgson:** Of things and so it's going to have, could have a greater impact from that standpoint.

>> **Gary Owen:** I think just the concern for Oklahomans is the frequency of earthquakes we're having because we are, I mean an earthquake once in a while and it's usually a small tremor kind of thing, but we're having some, the frequency of earthquakes is really I think of concern to Oklahomans. And so what we're going to talk about today I think is of great importance, but before we get on that platter I'd like to talk a little bit about your position at OU and the Gaylord College of Journalism and Mass Communication because it's a wonderful, wonderful facility and I'd like our audience to know about the studios, all of the technology that's involved I guess.

>> **Scott Hodgson:** Oh, it's fantastic. I came here in 2006 and they had just rebuilt a whole new complex and then a couple of years later they doubled the size of it. So there's this brand new state of the art facility that teaches everything from public relations and advertising and journalism to professional writing, how to write novels. I'm in the creative media production field and in particular we do corporate media is one of the tracks that I work on and corporate career, how do you do media that has a message? Media that tells something?

>> **Gary Owen:** Right.

>> **Scott Hodgson:** And the nice thing is there's some great studios in there and so we're able to do things that other people just can't do because we have the facilities and we have some great students and it's really fun working with students especially when you tell them are you interested in working on a project that might save lives? They're like, yeah, yeah. Yeah, most of my stuff, you know, I get my friends together and we do something and that's it.

>> **Gary Owen:** Sure.

>> **Scott Hodgson:** But to do something that could actually have an impact, save lives, help people, man that's exciting.

>> **Gary Owen:** And this general is so, not that all generations aren't, but there's something unique about this decade of generations where the students are not only creative but so innovative and that's, and they're already integrated into the computer technology and so they have a better understanding once they get into, for example, the [inaudible] bays. Something by the way speaking of that I want you to talk a little bit about that it's my understanding that you guys have received talk about the Apple partnership. I thought this was really good. This is really a wonderful thing.

>> **Scott Hodgson:** We're actually one of the few universities, there's just a couple of universities in the country or programs in the country that are recognized by Apple as an Apple distinguished program and because of our technology and the innovative use of technology and it's a nice honor. The key is people are changing how people view things, media changing, telling stories is basically the same but how you get it out, how you communicate to people that changes all the time and one of our challenges as educators is how do you keep up with the change of technology?

>> **Gary Owen:** Exactly. That's a challenge for most schools; they can't do it.

>> **Scott Hodgson:** Yeah, one advantage we have at a university, you know, I'm getting older but my students are always, you know, 18 to 22, 23 years old and they keep you young, they keep you vibrant, and they're just exciting. And so there's some times I just talk to my students and say how would you learn? I mean what would you do? And they teach me.

>> **Gary Owen:** Exactly.

>> **Scott Hodgson:** It's a give and take learning process, but the Gaylord College has just been absolutely fantastic and they really look for how do you do innovative and how do you get students involved in innovative type of things? And so this was kind of a give me when we had a project where I could take a group of students and say let's do a production for an entire summer and it was a pretty major production.

>> **Gary Owen:** The experience they get out of that when they leave the school and they go on to if they want to get into film making, if they want to get into television production, if they want to get into audio production, I mean that's what is so wonderful about this college is that it gives them take your pick what do you want to do but they're exposed to all of it. So, I think that's pretty unique and to have someone like you at the helm because of your broad spectrum of experience as a producer and director you're bringing a new dynamic. You're not just a broadcaster out there. You're coming in with a lot of experience.

>> **Scott Hodgson:** Yeah. One of the first things I did right before I came here is I produced a piece for PBS and worked with a group of students on what do you do during an earthquake? And we shot for a number of weekends and put this together and we actually recreated an entire earthquake scenario in different spots and put it together.

>> **Gary Owen:** Is this the one where you built the whole house on a set, right?

>> **Scott Hodgson:** No, this is the one where I actually built it in my house.

>> **Gary Owen:** Oh.

>> **Scott Hodgson:** Our whole kitchen scene, I told my wife and said, honey, you have to leave for the weekend and I don't want you to necessarily talk to me a lot. Just don't ask questions because we basically tore the whole --

>> **Gary Owen:** -- you destroyed the house, right?

>> **Scott Hodgson:** The nice thing is one of it was a ceiling fan falling.

>> **Gary Owen:** Oh, my.

>> **Scott Hodgson:** She got a new ceiling fan out of it. That was our big thing is she came home and I said, honey, we've got a new ceiling fan. Where's the old one? Well, it's kind of in the middle of the floor, you know, it fell during an earthquake. I must say our kitchen table was never the same after that. It's never actually stood up right.

>> **Gary Owen:** We've got to take a break. This is going to be fun to listen to and if you're concerned about earthquake preparedness, we've got some great information coming your way from Scott Hodgson who is a professor at the University of Oklahoma's Gaylord College of Journalism and Mass Communication. So stick around we've got a lot more to come on your science radio magazine, *Oklahoma Innovations*.

[Music]

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[Music]

>> **Gary Owen:** We are coming to you from the University of Oklahoma. This is where Chad Mullen got his degree in economics? What was your actual degree?

>> **Chad Mullen:** Well, I've got a few of them from Oklahoma.

>> **Gary Owen:** Okay.

>> **Chad Mullen:** I spent many, many years here and we're talking with Scott Hodgson a little bit about the Gaylord College of Journalism, and when I was going to the university here initially that was a parking lot where the building is today. And so a few of us were a little upset out parking spots were going away but when we saw that beautiful building being built, it was truly a great investment in and by the University of Oklahoma. The facilities that excited prior to it were a bit dated to say the least, but it's a wonderful facility and because of that I think we're having some really some pretty topnotch broadcasters and journalists and PR folks graduating from Oklahoma and really making our claim to fame there, but back to our guest today and what we're talking about earthquakes and earthquake mitigations. Scott, tell us a little bit about what's meant by earthquake mitigation.

>> **Scott Hodgson:** A mitigation is a term, nobody uses mitigation. I mean emergency managers use mitigation, but in essence mitigation is how do you, what things can you do ahead of time that is going to prevent damage in the future? What things can you do to prepare ahead of time to lessen the impact of something?

>> **Gary Owen:** Psychologically we have not up until now thought about that in Oklahoma. It hasn't been a big concern.

>> **Scott Hodgson:** No, no, I mean if you're in California, you expect that, you know, within the next 10 years I'm going to have something. I mean you have little tremors and things going on and so up to this point you don't think about it. In this area, it's long term between major events. And so if it's a 3-4 generation between major events, you don't think about it.

>> **Gary Owen:** Right.

>> **Scott Hodgson:** The one advantage that Oklahoma has had is the increase in earthquakes and now suddenly, you know, I moved here in 2006 and the question was, you know, am I going to get earthquake insurance? No, you don't have earthquakes in Oklahoma. I'm thinking about earthquake insurance, you know.

>> **Gary Owen:** I got it 2 years ago.

>> **Scott Hodgson:** Yeah, you know because now you have to start thinking about those things just because geologically the ground shifts, it's shifting here in Oklahoma.

>> **Gary Owen:** The magnitude of earthquakes, should we be concerned about that do you think based on the frequency? I mean when you collaborate with scientists here at the university, I'm sure you do some of that don't you? What kind of impact do you get from earth sciences department over here? Do they talk about that much?

>> **Scott Hodgson:** Yeah, first of all I need to say I'm a video producer, I'm not a geologist, but I'm married to one.

>> **Gary Owen:** But I'm saying in your collaborations when you're trying to get a handle on it.

>> **Scott Hodgson:** When we're talking about this, and I'll talk in very general terms that there are certain things you do for a 3 and 4 earthquake you sit there and go, oh, this is kind of nice, the ground is shaking, and you enjoy the experience. When you start getting up to a 5.0 earthquake and really as you go up, they're kind of, they're magnifying significantly. As those numbers go up, the impact is much greater. When you get a 5, things are going to start moving around. You start getting above that, you get up to a 6 and you're now talking significant damage.

>> **Gary Owen:** Yeah.

>> **Scott Hodgson:** You get to a 7 and you're going to have deaths. I mean that's the kind of thing you have. We necessarily haven't built here for earthquakes, we've built some for tornados and there's some overlap between that, but there's some problems.

>> **Gary Owen:** Structurally overall our homes are not and buildings are not built for that.

>> **Scott Hodgson:** No, the code wasn't there. I mean it's --

>> **Gary Owen:** -- it wasn't a concern.

>> **Scott Hodgson:** Yeah.

>> **Chad Mullen:** Now, Scott, you've got a grant from FEMA, right? Tell us a little bit about that.

>> **Scott Hodgson:** We did. So, there was one day I was working with my colleagues in Illinois because they're still, they are concerned about this because that's, that whole area up there they're saying we are expecting another New Madrid type event at some point, not sure when, but we need to be prepared for that. And so we were talking and we were looking through websites because, you know, that's where most people would go and say, hey, I want to find out what to do and they're going to look around and I begin to realize it's really hard to find good material out there. There is good material out there but you've got to really go like 5 or 6 layers deep in somebody's website and when you get there, you've got a lot of great printed material with some guidelines, but we realized that for today's modern internet user they want something different. They need something that is short, sweet, that's going to give you inactive, allow them to find what their needs are and they want something visual. Text is only so good and so we began looking around and, you know, you have a bunch of students and I just said take a look, rate them. And, you know, they couldn't find very much. Now there are some great ones in California, there's some nice things out there, but there's nothing really geared towards the Midwest. And so we said, we went to FEMA and said, look, we're interested in producing a whole series of little mini videos on a single topic, how do you hang pictures to keep your pictures from falling off the wall, you know? How do you do things in the kitchen, what should you do? And have little individual things and where they could go into a website and be added to somebody's website to add visual elements to actually show people what to do to be very practical little things that they could click around and find and be able to answer the questions what do I do?

>> **Chad Mullen:** Scott, I would say that, you know, here in Oklahoma we probably and even though we have started to a little bit our earthquakes have been small enough we haven't really thought about things like hanging pictures properly. It's just something we have never concerned ourselves. When you're putting all this information together using California as an example, do folks out there even do that? Or are they just focused more on the structural integrity of the buildings?

>> **Scott Hodgson:** Oh, oh, they most certainly do a lot of the stuff.

>> **Chad Mullen:** Okay.

>> **Gary Owen:** They do both.

>> **Scott Hodgson:** Yeah. They have to and, you know, most of my stuff on, I haven't done a lot of work yet. In the future, we're looking at doing things geared towards construction folks. What we're looking at now and what we're working on right now is producing these series of videos that will go on offer to websites for any government, ready dot gov type websites that they can put it on and have that material, but we're looking at the homeowner. What are things you can do? What are some simple things as you look around your home and how to do surveys and there are certain things that most people haven't done some of the simplest things like take it around your house and just identify if this house started shaking, what should I do? Stuff in the kitchen, stuff in the living room, stuff in the bedroom, you know, there's little things we should do and, you know, how is your emergency preparedness kit going to be different? Because there's some different things you do from a tornado to an earthquake and, you know, and so we've been looking at that going, wow, there's some really cool things that we can give some information on

here and if you just do some of those, you can really help prepare yourself if an earthquake came, and we're not talking about a big earthquake we're talking about a smaller, mid-sized earthquake to help prevent damage and keep your stuff safe.

>> Gary Owen: We've got a lot more to talk about with Scott Hodgson when we come back from the University of Oklahoma in Norman on *Oklahoma Innovations*.

[Music]

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[Music]

>> Gary Owen: *Oklahoma Innovations* with Gary Owen and Chad Mullen. We're coming to you from the University of Oklahoma. A very exciting, very enthusiastic guest this week. Scott Hodgson, he's a professor at the University of Oklahoma in the Gaylord College of Journalism and Mass Communication and he's been working on videos to help us be better prepared in case of an earthquake.

>> **Chad Mullen:** Well, Gary, I think it's something that, you know, we need to start thinking about here in Oklahoma and as we have learned today not just because of the seismic activity in Oklahoma but how a large, large scale event somewhere else in the region could really impact us. So I'm looking forward to hearing some of the stuff. Scott, tell us a little bit about I believe there's a big earthquake in 2014 in Napa Valley and there were some good lessons learned from that. Tell us a little bit about that.

>> **Scott Hodgson:** They had about a 6.0 earthquake, which is a strong earthquake. It's not quite a 6.5 but there were quite a few injuries, over 120 people that were injured in that, but it happened at 3:20AM and that brought some unique things into perspective. I want you to think about it. Imagine what are you doing at 3:20?

>> **Gary Owen:** You're probably sleeping.

>> **Scott Hodgson:** You're probably asleep. Okay, so most people were asleep, you know, some of my students are just getting to their house but for most people they're asleep. All right earthquake happens, your electricity is off because some power lines are down everything is going around you, what do you do?

>> **Gary Owen:** Well, if I was Chad, he'd probably sleep through it.

>> **Chad Mullen:** I would that's true.

>> **Gary Owen:** But, no, I understand you are jolted out of bed basically.

>> **Scott Hodgson:** Yeah. So, I was interested and one of the things I started listening because I'm doing this kind of stuff is I started listening to what were the dangers? And there were a lot of injuries and the number one injury, guess what the number one injury was.

>> **Gary Owen:** I would say glass.

>> **Scott Hodgson:** It was. It was actually feet.

>> **Gary Owen:** Causing the, yeah.

>> **Scott Hodgson:** Yeah, because what happened is people got out of bed and what they didn't realize is that their window next to their bed broke or that picture they had hanging up that had glass was broken or they had shards down or they would go into the kitchen because they keep their flashlight in the kitchen and just walking in they cut their feet. And so that was one of the number one things. The other thing is that a lot of the damage not only damage from the shaking but there were 50 gas leaks and some of those sparked fires. You know if you look at major disasters, if you take a look at say the Moore Tornado and you could find some mini disasters you get these great aerial shots and you're seeing the rescues that are happening at the schools but off in the distance you see these fires going on. Well, these are houses that exploded because a gas line ruptured and it set it off. Same thing happens in super storm Sandy, you know, you had a whole section in New York City that just burned down because of open gas lines. And so that is that secondary problem in an earthquake is your gas line.

>> **Gary Owen:** I remember when the film Earthquake came out and the technology at that time was surround sound. Did you ever experience that?

>> **Scott Hodgson:** No, I didn't.

>> **Gary Owen:** Okay, you missed a great experience because the whole, you're in a movie theatre environment you have this huge screen and at that time the sound technology had changed and was relatively new and it wasn't just about woofers I mean when you're sitting in your seat, you felt like the theatre was literally shaking and it was like being in an amusement park experience, but between the sound, the visuals and the vibrations of the room making you really sense a real earthquake even if you don't sense that if you haven't seen the file it's been out for years, but it gives you a real good idea what actually happens in an earthquake.

>> **Scott Hodgson:** We actually for the first video that we actually produced for this we watched that film and analyzed it and see how they did it and my students were like we can do better than that. I'll never forget our first experiment in this how do you shake the camera to make it look like it's not just somebody shaking the camera but actually looks like the movement.

>> **Gary Owen:** That's right.

>> **Scott Hodgson:** We wanted to say, you know, if we're going to have parts of the ceiling crumble, you know, what do we do? And so we got in a room and we had these different things and the first thing we tried, oh, let's try talcum powder, baby powder. And so we took a big bottle and squeezed it to see what it looked like, we had to evacuate the room. I mean we couldn't breathe for 20 minutes. We couldn't even go in there and so we found some different things, but that movie kind of set it off because in many ways you experience a major earthquake once. We want you to experience it ahead of time so you can kind of see. So because look when an earthquake happens, what are you going to do? There's an earthquake, hey, let's go on the internet and search what I'm supposed to do. No, you have seconds to decide what to do and if you can see and kind of experience that and kind of have your senses already tweaked because you've seen what an earthquake happens and you've seen somebody doing something that really helps.

>> **Gary Owen:** Well, it goes back to the fire departments wanting you to be fire prepared in case you have a fire. This is why we have smoke detectors in our home.

>> **Scott Hodgson:** Right, right.

>> **Gary Owen:** All right so now we're going to take a look at the earthquake preparedness because as you've early discussed with Chad and I is there are some things we can do, there are simple things that if you're prepared in your home between what you have on the walls, what you have on the shelves and, you know, you were talking about feet a while ago. I mean used to our moms and dads or grandmas and grandpas they put their house shoes on, you know, their slippers. Today's generations we don't do that. If we hop out of bed, we're in our bare feet most of the time. We don't have slippers sitting by the bed. I mean a lot of people don't, you know, so those are really simple things when you talk about it but we're talking about a lot of areas you've got to look at. So talk about that.

>> **Scott Hodgson:** The first thing is a lot of people we start asking what are you doing and they didn't do anything, but as we began asking it, really the first thing is just walk around your house and look around and try to identify some of the really major things. Major things are going to be like tall furniture. You've got a bookcase. If that bookcase were going to fall over, what would it fall on top of? Is it going to fall because you placed it that if it falls over it falls right where a kid's playpen is? Or where you sit or something of that nature and you might say, hey, maybe I

want to reorient it so that if this thing falls it's going to fall away from a normal area. And you know what that really beautiful glass vase you stick on top of the bookcase --

>> **Gary Owen:** -- that's expensive.

>> **Scott Hodgson:** Oh, yeah. So not only are you going to lose that thing because it's going to fall off but now you have glass shards all over the place, you know, so definitely what do you have up high? What do you have that you don't want to be damaged? And then how do you keep that safe? You know how do you keep those fragile things safe? And there's some real techniques to do that. So, the first thing is just kind of looking around. You know what the most, the number one problem is in a house?

>> **Chad Mullen:** I have no idea.

>> **Scott Hodgson:** It's your hot water heater. And here's the reason for it is hot water heaters stay in place a lot of them aren't fastened down because gravity just holds them in place. Well, gravity also in an earthquake things fall. When the house starts shaking, that top heavy full of water can tip over. Now that's not the most dangerous thing. The more dangerous thing is most or a lot of those hot water heaters are hooked to gas lines and that gas line breaks when it tips over. And so there's a lot on how do you strap your hot water heater? And it used to be that you put plumber's tape, okay, it's little thin metal tape. It's about, oh, three-quarters of an inch thick and has little holes in it and you just put a lot of that and screw it into the wall. Well, from California earthquakes it was discovered that stuff doesn't hold and, you know, when I was first doing stuff back in the 80s and 90s on this, that's what they said and then finally hit about 2000 said plumber's tape does not work. You have to use a double strapping kit and actually physically strap your water heater. So, hey, walk into your hot water heater and say is this strapped down? You know do I have flexible gas lines or is it hard gas line coming into it? You know and so there's different things in the room. Hey, let's go back to one of the things that we talked about and you were talking about getting into bed and cutting your feet and stuff.

>> **Gary Owen:** Yeah, yeah.

>> **Scott Hodgson:** You know if you're in bed and you got to figure 8 hours, assuming you get 8 hours which is one-third of your day is actually --

>> **Gary Owen:** -- you're sleeping.

>> **Scott Hodgson:** Yeah. And so good chances are that's when it might, an earthquake might occur. One of the things that we said is and we've heard about to go kits. If you're in tornado country, you're always thinking about to go kits and something you could pick up and have ready and normally put by the door because in an earthquake you want to have it there. Simple thing move that to go kit to your bedroom and put it underneath your bed and I actually put it underneath a table and I bought pink ones for my boys. I figured they'd never use them for an athletic bag, they can see them, but the 2 things I put in the top of them. One is a pair of shoes and 2 is a flashlight. Those are the first 2 things that you need to be able to get. There's other things you would put in a kit, but you need those 2 and that's going to be the same thing for a tornado, same thing for other major storms, you know, keep it where you can get to it when you're asleep.

>> **Gary Owen:** You know when you think about this the first reaction we have in a major disaster is to hit the door and get out from underneath the roof. That's our initial reaction in tornados and so forth after the event has occurred. Our instinct is to get outside and see the

damage, see what's going on around your environment. And so what you just said simple things having shoes and a flashlight for nighttime preparedness that's incredible. We've got to take a break here, Scott. We only have 1 break, 1 segment left. We're going to have to go down the bullet list pretty quick when we come back. Gary Owen and Chad Mullen coming to you from the University of Oklahoma. More to come on *Oklahoma Innovations*.

[Music]

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[Music]

>> **Gary Owen:** We certainly hope that you're gaining some new insights on earthquake preparedness. This is an interesting show.

>> **Chad Mullen:** Yeah, absolutely. I've certainly learned a few things here I'm not prepared at all necessarily for an earthquake and I had always thought about it just something that could happen here locally but never really understood the regional threat so to speak. So, we're learning a lot here and we appreciate our guest, Scott, for being on here today. So, Scott, when we left the break, you talked about two things that you had in an emergency kit. Could you run through a few other things? And give us some tips on what we could do.

>> **Scott Hodgson:** All right. Well, let's kind of go through the house. So, let's start in the kitchen. So what do you have and what would you want to protect in the kitchen? Well, the first thing is you've got some major appliances and all modern day stoves are now sold with anti-tip devices and you may have an older stove that doesn't have one of those or never installed it and it's a very simple thing. You screw it in the floor and it keeps that from tipping over. You can also get strapping kits that keep your refrigerator from tipping over. You don't want to lose that refrigerator. I mean that's expensive and you're going to need that throughout the --

>> **Gary Owen:** -- and they do, they do, refrigerators are on wheels and they can move out of place.

>> **Chad Mullen:** Absolutely.

>> **Gary Owen:** Just wobble across the floor, right?

>> **Scott Hodgson:** Absolutely, but you keep your China out so let's say you kept your very fine China up there and so one of the things we say is, you know, the kid proof latches you stick,

keep them around and put them on your upper shelves because not only do they keep kids out they also keep your stuff in. And so with fine China if you put a rubber mat down it keeps things from sliding. At least the bottom one from sliding. And then a little trick is if you cut out little squares of the foam matting that you have for lining shelves and stick a little piece between each one of your plates, that whole stack will then keep pretty solid and won't be shaking around. Glasses, you've got to figure out we sometimes store glasses with the open side up but sometimes it's more stable if you just turn them over and we'll keep them safe. Your chemicals underneath your sink are also a problem, you know, and your kids are old enough you can take those safety devices off and put them back on to keep those things from spilling out. Nothing like having Clorox bleach all over your floor mixed in with your broken glass and we're teaching people put them in bins that will kind of keep everything upright. Let's see let's go into your living room, all right. So you're in your living room what's your most expensive thing in your living room or family room?

>> **Chad Mullen:** Television.

>> **Scott Hodgson:** Uh-huh, where is your television?

>> **Chad Mullen:** It is up on a shelf.

>> **Gary Owen:** Or it's hanging on a wall.

>> **Scott Hodgson:** It's hanging on a shelf. Yeah. On a shelf, goodbye, it's gone. Those things are so top heavy forget it you're going to lose it. You really have to mount them to the wall. In fact, we were going to do a video on how to use the strapping kit to strap them and we just said we can't do it, we can't figure out how to do that because even if you strap it down to a table, that table is going to move it's going to be a lost cause. Really for a big TV mount it on the wall.

>> **Gary Owen:** Yeah, because most of those mounts are pretty solid. I mean they are mounted to in studs and so --

>> **Scott Hodgson:** -- oh, yeah, and everything has to go in the studs.

>> **Gary Owen:** Now, if they've got an extension on them where they swing or pivot, they may out away from the wall a little bit but overall they're pretty safe.

>> **Scott Hodgson:** But even those still the mount you can screw them right into this stud, hit a couple of studs. Your shelving units. Are they screwed into the all? Your big shelves are they going to tip over? And that's another thing.

>> **Gary Owen:** I think mine are built in.

>> **Scott Hodgson:** So what's on the top shelf? Where do you put all your cool decorative stuff? A lot of people put them on the top or on the very top. In the kitchen, you put a little cabinets. All right those should move down lower, but you are going to have fragile stuff, you are going to have glass and just really cool products out there that we played with this summer. It was fun and there's some stuff called museum putty and it's basically like Play-Doh type thing. You make little balls of that you stick it on the bottom of the things you don't want to, you don't want to move, you press them down and just turn them a little bit, you can shake the whole table --

>> **Gary Owen:** -- like glued to the shelf.

>> **Scott Hodgson:** But if you want to take them up, it's easy to take up.

>> **Gary Owen:** Just pop it.

>> **Scott Hodgson:** Yeah. There is a, some earthquake gel type material which is clear that you can put on clear glass. It does basically the same stuff and it's not very expensive. You can get them at your local hardware store and you just go along and say oh I got these little plates I want to put that on the wall. Your other thing is big pictures or mirrors. A lot of people like putting big pictures or mirrors. I mean I have some on my wall. And we put them in these little hooks that come down but when shaking, they're going to pop right off those hooks. And so there are hooks out there very, that you can get that will not let the wire pop off the hook, but also they're putting them with a little nail in the dry wall, those types of things. So you may have 2 hooks, find some place that you can go straight into a stud and you may still have those 2 hooks put a safety one into a stud.

>> **Gary Owen:** Yeah, good idea.

>> **Scott Hodgson:** It's going to keep that from crashing on the ground.

>> **Gary Owen:** Good idea.

>> **Scott Hodgson:** It's going to save the picture and save that. So you've got a lot of expensive things. Look around.

>> **Gary Owen:** Now you've touched on all the light things and the things that might break, I think another issue a lot of people have open shelves for canned goods, large chemicals. For example, I mean I know some people have their cleaning chemicals on top of their washers. Or they have open pantries that don't have doors on them that are, you know, maybe have shelves that aren't nailed against the wall.

>> **Scott Hodgson:** Right.

>> **Gary Owen:** Look at grocery stores. We've seen video of how easy it is to topple stacks of canned goods.

>> **Scott Hodgson:** So we've seen videos on how do you attach your shelves to the walls and then when you have those open shelves, let's say you have shelves. Let's take your garage it's a little easier for me to explain. You buy your metal shelving unit --

>> **Gary Owen:** -- those are really flimsy.

>> **Scott Hodgson:** Yeah. We put some plastic shelves together those things are not good. When you've got a little metal one, but they're all open.

>> **Gary Owen:** Exactly.

>> **Scott Hodgson:** But we bought some 4 foot bungee cords and just took them from the wall all the around the shelves and back and did them at, you know, about 6 inches above and then took all of our little things and stuck them in bins, little plastic bins.

>> **Gary Owen:** That's a great idea.

>> **Scott Hodgson:** And it keeps them on the shelves. We make some bigger ones and put all of our chemicals not on the top shelf, put your chemicals on the bottom shelf and those are really helpful and so we came up with different videos to show how do you do this and gave you 3 or 4 different options that will be available for how to do that.

>> **Gary Owen:** Okay, we're coming down to we've only got a couple of minutes left and Chad is real excited about, I know he wants to know about your videos and how we're going to get that.

>> **Chad Mullen:** We want to talk about that and I think in just the last minute tell us what to do when an earthquake is actually happening.

>> **Scott Hodgson:** Okay, so most of our stuff is on what to do beforehand. When an earthquake, there's very simple. It's called drop, cover and hold and the fact is drop wherever you are because one of the things is in a major earthquake the earthquake while drop you. It will send you to the ground.

>> **Gary Owen:** Right.

>> **Scott Hodgson:** Drop to the ground so that if you do need to move you're not doing it standing up you're doing it crawling. Cover. Assume you're going to be someplace where they didn't prepare the home or you're at a grocery store, you know.

>> **Gary Owen:** Or a place of business.

>> **Scott Hodgson:** Yeah. And the main thing is cover your head. That's your most dangerous. Anything you can do to cover your head and then try to get to a safe place and take cover and hold on. You know a corner is actually safer, but sometimes the middle of the room is the best place to be. Do a quick survey and look around and say is anything going to fall on me where I am? And if so, try to get away from that.

>> **Gary Owen:** Yeah.

>> **Scott Hodgson:** So it's drop, cover and hold and here's the thing if you've got a family, you've got to practice this.

>> **Gary Owen:** You're got to rehearse it.

>> **Scott Hodgson:** You've got to come up with times you can practice and rehearse it.

>> **Chad Mullen:** We were talking in the break that it's, unlike a tornado where you have a very narrow swath, the earthquake is going to create a large swath of disaster so you may be on your own for several days. I think the same way we prepare for ice storms here a lot of times.

>> **Gary Owen:** Store up, right.

>> **Chad Mullen:** Food and water and make sure you have some of those essential things on there. The videos you can find. Scott is putting them together right now. They're going to be disseminated through emergency management agencies at each state and Oklahoma ours is oem.ok.gov. So we hope to see them there soon and if you want to find out about the production of some of the videos and see some of them that have been created so far, you can go to earthquakemitigation.com. So that's earthquakemitigation.com and see what's coming.

>> **Scott Hodgson:** There's some cool behind the scenes on how we made some of these videos at earthquakemitigation.com.

>> **Chad Mullen:** It's good. We saw a few of them. It's definitely worth a visit.

>> **Gary Owen:** It is and what will be the project once you get done with this? I mean you're always coming up with new projects.

>> **Scott Hodgson:** Oh, we're looking at things because there's not just earthquakes there's also tornados, you know, what do you do to prep? And there's different audiences because we want to help people that are in the construction business. How do you physically build things for an earthquake? And different audiences and different languages.

>> **Gary Owen:** And, Scott, what I love about what you're doing these are not long, boring videos. These are very short, concise to the point videos, very well produced, and I think if you can again like we mentioned a moment ago go see the videos how they're being created that's, that'll give you a pretty good idea of what's going to be actually online.

>> **Scott Hodgson:** And they are a lot of fun. If you like behind the scenes --

>> **Gary Owen:** -- and for your students what a great project to be involved in as a learning experience but also something they're doing worthwhile to help save lives. Scott, you've been a wonderful guest. We certainly appreciate what you're doing and we're going to ear mark you for a future guest.

>> **Chad Mullen:** Yeah, absolutely.

>> **Gary Owen:** And kind of know what you're doing in production as well and hats off to you for what you're doing for the Gaylord College of Journalism and Mass Communication at OU. We want to thank you, our audience, for listening and, Scott, thank you and, Chad, we'll talk to you next time.

>> **Scott Hodgson:** Appreciate it.

>> **Gary Owen:** On another edition of *Oklahoma Innovations*. Have a good week.

[Music]

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