

Music (00:00):

Ketsa. "Mission Ready." Raising Frequency, <https://freemusicarchive.org/static>.

Trudy (00:08):

Welcome to Hotwash. We are Trudy Henson...

Christine (00:11):

And Christine Gentry, legal and public health experts working in emergency management and public health preparedness at the University of Maryland, Center for Health and Homeland Security. This podcast is our exploration of topics that come up in our line of work, and since it doesn't always make the best conversation at parties, we're taking it to the airwaves to share with other interested individuals, whether you're an academic, an emergency management or public health professional, a student, or the interested public.

Trudy (00:39):

We hope to shed light on legal and policy issues that arise, delve into planning and operational areas that don't always make the headlines and tackle emerging issues. We take our jobs very seriously and we'll explore serious topics in this podcast, but we'll also take the opportunity to explore the lighter side of emergency management

Music (00:57):

Music

Christine (01:07):

Well, welcome everybody to our first episode of Hotwash: Law and Policy of Emergencies.

Trudy (01:12):

Welcome everybody. This is Trudy. Christine, before we get started, what is a hot wash?

Christine (01:18):

Trudy, don't you know that by now?

Trudy (01:20):

Well, I probably should just in case.

Christine (01:24):

So a hotwash that I think the term originally came from the military, and it's used most frequently in emergency management after an exercise or a real world emergency. And it's the process of essentially going through and saying what went well, what didn't go well and what can we improve for next time?

Trudy (01:43):

I see. Alright, well then it makes sense for that to be the name of our podcast since we're going to be talking about emergency management and public health preparedness and what happens in why it happens that way and what can be better or different. All right. So Christine, how did you end up here?

Christine ([01:59](#)):

You're just so inquisitive this morning.

Christine ([02:01](#)):

I have a lot of questions.

Christine ([02:03](#)):

Well, I mean I have a J.D. and an MPH, and I was very interested in health and an environmental law and policy. I sort of ended up in the field, I hate to admit, accidentally through public health emergency preparedness. It was incredibly interesting field that I really, really enjoyed. So I've worked here at the Center for the past, gosh, it's coming my six year anniversary this year. So turnabout is fair play. How did you end up here?

Trudy ([02:34](#)):

I kind of ended up along the same path. I came to law school. I was interested in health law policy and got interested in homeland security and public health preparedness. And I've been at the Center now for over 10 years. A little long in the tooth as they say. Okay. So we're gonna get into the title of this podcast, this episode a hundred years after the great molasses flood, emergency management and what has changed. You may be asking yourself what great molasses flood a hundred years ago, and Christine, I think you're going to help us with that.

Christine ([03:11](#)):

Yeah. So great question guys. If you asked yourself, what is the great molasses flood, I'm here to provide you with some background. So January 15th, 1919 Purity Distilling Company, which is a subsidiary of US Industrial Alcohol, was using molasses to make alcohol. They'd set up the operation initially to make alcohol that was used in munitions, but after the world war, they were transitioning, um, to sort of drinking alcohol, especially in light of upcoming prohibition. So they really wanted to make as much alcohol as possible as quickly as possible,

Trudy ([03:49](#)):

Obviously.

Christine ([03:50](#)):

Yeah. Around lunchtime that day there was a huge tank of molasses that exploded. Now you could be asking yourself how good, how big of a deal could that really be?

Trudy ([04:01](#)):

Right. Some syrup. Yeah. Some sort of places. Places that wasn't supposed to be sticky, but yeah. What's the real, what's the big deal? Yeah, the problem.

Christine ([04:11](#)):

Let me tell you about it. It wasn't a problem. It does. I mean, on initial hearing about it, it sounds kind of silly, but it was a huge deal. The tank was absolutely enormous. It held 2.3 million gallons of molasses. It was about 90 feet in circumference and 50 feet tall. So ginormous. And the explosion itself caused about a two story tall wave of molasses. Experts have figured out that it traveled as quickly as 35 miles per

hour so that there's no getting out of that oncoming wave. Yeah. Fun little fact. Apparently molasses is a non-Newtonian substance.

Trudy ([04:54](#)):

And what does that mean for those of us who don't know.

Christine ([04:57](#)):

For purposes of this podcast, it doesn't matter.

Trudy ([05:01](#)):

That won't be on the quiz?

Christine ([05:03](#)):

No quiz. Yeah. In addition to the wave of molasses itself, the tank exploded causing things like rivets and small pieces of tank to burst out like bullets essentially, like shrapnel. It hit people, injuring them.

Trudy ([05:17](#)):

So you have metal flying out in addition to a 35 foot wave. Traveling at 35 foot wave or 35 miles an hour for 35 miles per hour. Three stories high.

Christine ([05:27](#)):

Yeah. So think about the destruction that happens after a mudslide. The wave of molasses picked up buildings. It crushed entire buildings and poured into people's homes. There were, there was a mix of sort of residential and industrial in the area.

Trudy ([05:43](#)):

And this was, is this Boston's North End.

Christine ([05:45](#)):

Oh, sorry. I don't think I said that. Okay. Yeah. So it poured into people's homes at one point. It destroyed a section of the elevated train. So the Boston post has this kind of terrifying description of it.

Trudy ([05:57](#)):

As if this isn't terrifying enough? We have some description from back in the day.

Christine ([06:02](#)):

Back in the day. Yeah. So the Boston posts wrote: "molasses waist deep covered in the street and swirled and bubbled around the wreckage here and there a struggle formed, whether it was an animal or a human being, was impossible to tell. Only an upheaval a thrashing about in the sticky mass. Horses died like so many flies on sticky fly paper. The more they struggled, the deeper in the mess they were ensnared.

Trudy ([06:29](#)):

And so what was the, was kind of the outcome of that?

Christine (06:32):

So 21 people died, there were around hundred and 50 injured, and in today's money, it cost about a hundred million dollars.

Trudy (06:42):

Wow. So one of the things that I read was that it smelled in that neighborhood, like molasses for four years afterwards, because even though they did the cleanup, the, it was just, it just kind of lingered. I think that's really interesting. And then I think the other thing that I read that was really fascinating to me was they had a difficulty with cleanup because even though the tank itself had exploded because they got hot, the weather was actually cold. And so then the molasses cooled and sort of super cooled and then you're kind of dealing with hardened, kind of frozen molasses that you're trying to clean up.

Christine (07:20):

Yeah. So it's actually very terrifying and makes a great case study for us about a hundred years later. So Trudy, one of the first things that comes to my mind when I think about this scenario is who is responsible, both who's responsible in the initial aftermath for responding, life safety, and incident stabilization, et cetera, and then who's legally responsible.

Trudy (07:46):

Yeah, I think that that's the first question that pops into most people's minds. So who is responsible for that initial response for the, for the cleanup of the flood or the rescue? I mean, at first it's going to be a search and rescue kind of situation, at least in modern times.

Christine (08:01):

Right. And that's how it unfolded back in the day. Apparently, the first people who responded were 116 cadets, and a Lieutenant from the U.S.S. Nantucket. We had red cross volunteers, police army and Navy personnel and fire the fire department.

Trudy (08:26):

So there was actually pretty robust response to, that's pretty analogous to modern day in some ways.

Christine (08:32):

Right. One of the biggest differences of course is these were all spontaneous volunteers. The cadets just ran, you know what I mean? They saw the explosion. They're like, yep, we can help with that. So good on them. But spontaneous volunteers, of course, mean that no one organization was in charge. Nobody knew exactly who was there. So if someone had gone into a building that was not sound and maybe the building fell over, no one would know who was missing. Medically wise, since there were so many people injured, 150 at least, we had volunteers, volunteer doctors also sort of spontaneously arrive on scene and essentially set up a field hospital. And back into the day, ambulances were run by funeral home directors because they were the only one, the only sort of people who had vehicles and wagons and things that people could lay down. Yes. So it may be a short ride if you're very, if you're very seriously injured. Hopefully a streamlined, yeah. So yeah, so it was a really a pretty interesting response. A lot of different organizations represented, but some clear differences to how we would respond today.

Trudy ([09:50](#)):

And what do you think the biggest differences from then and now?

Christine ([09:52](#)):

I think it's the coordination. I mean if something like this happened nowadays citizens would probably get out their iPhone and record the incident, but some of them would also hopefully call nine one one. And so at nine one one call centers, the dispatchers would be able to do the initial coordination. They would send out police and fire, they would send out the rescue squad and a lot of ambulances. They would be able to pull resources not just from whatever first due we're in, but also from using like mutual aid from different jurisdictions to pull in a number of resources. We also have the incident command system that is used by first responders. So that first, whether it's police or fire, whoever's on scene first would take charge of the incident. They would be in command until, of course you get like a battalion chief or somebody who shows up. And so while people are responding on scene, there's also a mobilization of the local emergency manager's office.

Trudy ([10:53](#)):

Right. Which is a big difference from a hundred years ago. We didn't have right, such an office.

Christine ([10:59](#)):

No, no. Emergency management really wasn't a thing in the civilian world at the time.

Trudy ([11:05](#)):

The other question is who's responsible from a legal liability standpoint? You know, and to put that in sort of modern terms, like who are we going to sue? I mean, being lawyers that pops into our heads. If we don't, if we don't ask it, someone's asking us, who can I sue?

Christine ([11:23](#)):

Particularly with something this damaging \$100 million in today's money.

Trudy ([11:28](#)):

Yeah. So that's, I mean that's a big, it's a big check. So in terms of legal liability, it sounds like maybe the company that built this tank is going to be the ones found ultimately responsible. There's a lot of reports that the tank was built hastily maybe because there was that deadline of prohibition looming and I think Christine, you mentioned that there were reports of kids that would go up in the streets and scoop up molasses on sticks and make sort of impromptu lollipops because the tank was already leaking I think pretty much from day one. And so one of the questions that often comes up with these kinds of disasters is, is that company going to be held liable for that? What sounds like negligence? And so that's one question.

Christine ([12:15](#)):

And I think ultimately, right, they were?

Trudy ([12:16](#)):

They were, yeah. That's not always the case. A lot of times the disasters, you can't necessarily find someone that is responsible in the same way, especially when you're talking natural disasters. So the

question gets a little more complicated, but we certainly see some of the same issues. You know, our buildings built to withstand the disasters that are the areas known to face or might face and who's responsible if those systems fail. So another question that comes up with these kinds of events is, did we know this could happen? How could this happen? Did we know this could happen? Did we know that this was even a threat or a danger? You know, it sounds like maybe in the North end of Boston, people were aware of the tank might be leaky. Maybe they weren't aware that the tank could explode. And so that leads to the question a lot of times in disasters, man-made or natural, when we see some of the secondary effects, did we know this could happen? So how do we deal with that in modern time?

Christine ([13:17](#)):

So in modern times, local emergency management offices very frequently do threat assessments. They are most familiar with what whatever's in their area, either sort of the natural hazards, you know, some of the jurisdictions on bodies of water, like the Bay, know that they are susceptible to flooding in certain areas. But local emergency managers also are familiar with what is in their jurisdiction, be it like a college, I'm not suggesting college students are dangerous. But just sort of a large population centers. Also industrial industrial hazards.

Trudy ([13:58](#)):

So like chemical plants, right?

Christine ([14:00](#)):

So today's emergency managers do these threat assessments and they also take part in mitigation efforts mitigation. And recently in recent years it's been getting a lot more attention. There's a lot more federal and state efforts to make things as safe as possible.

Trudy ([14:18](#)):

Before something happens.

Christine ([14:19](#)):

Right, right.

Trudy ([14:21](#)):

So and knowing what's in your backyard essentially is one way of mitigating. Right, exactly. Cause you need to know, and we, we've seen this what I think of when I think of threat assessments and the outcomes of natural disasters or some of the floods that happened in Texas. And I think there were some chemical plants that exploded because they were flooded. And those were near residential areas. I think there were neighborhoods like one street over. And so that's a sort of modern example of I'm sure that the emergency management agency there knew about those chemical plants and had that information and knew that was a possibility. And then that's a difference I think from a hundred years ago. So we talked a little bit about what's different now in terms of the response structure that happened. Are there other things that come to mind when we're talking about this? Because when I think about what's different from a hundred years ago, I mean like you were, you were saying people would break out their phones and start recording. Social media and media in general is completely different. But are there other things that you think of that come to mind?

Christine ([15:25](#)):

I mean, I think we've had a huge shift in just sort of attitude about emergencies. I think more and more emergency management recognizes cascading effects of emergencies. It's not just the immediate explosion of the molasses tank, but it's also you've numerous displaced people. You have hospital surge. You have people who witnessed this horrific scene who need crisis counseling, who need maybe long-term support. You have local businesses that have to institute some sort of continuity plan in order to stay in business. So I think there are a lot of things that we recognize now that happen during an emergency, and so we are able to plan for them in a more robust manner. And also I think we're a lot better at bringing in potential partners. It's not just police and fire and hospitals, it's also like department of housing and department of human services, department of social services. I think we're, we're better at partnering with nongovernmental agencies as well.

Trudy ([16:27](#)):

I was going to say, I think one of the differences that we've seen, especially in the last several years is the bigger emphasis on public private partnerships. So bringing in those private companies and what they they can bring to the table and support.

Christine ([16:41](#)):

Right. Which is a lot. Yeah, and I think maybe the final piece that you already sort of touched on it with social media is I think we're, we're doing a lot better at integrating technology into response, be it sort of communication technologies or GIS mapping.

Trudy ([16:56](#)):

Yeah. That's been a tremendous game changer with GIS mapping.

Christine ([17:00](#)):

Yeah, that's my 2 cents.

Trudy ([17:04](#)):

Well, I think that that's going to wrap up our initial? Inaugural? First episode. Is that enough? for hotwash so we'll be back. Thanks for listening.

Music ([17:23](#)):

Music