

## Severe Weather Awareness Week – Monday: Flash Floods

### RUN TIME: 5 MIN 30 SECONDS

**Stefanie Bond, Public Information Officer**

Iowa Homeland Security and Emergency Management Division

**Jeff Johnson, Warning Coordination Meteorologist**

National Weather Service (Des Moines)

**STEFANIE:** Well, hello there. My name is Stefanie Bond and I am a public information officer at Iowa Homeland Security and Emergency Management.

**JEFF:** I'm Jeff Johnson with the National Weather Service office in Des Moines.

**STEFANIE:** Welcome, Jeff.

**JEFF:** And welcome, thanks for having us.

**STEFANIE:** Well thank you for being here! Severe Weather Awareness Week...that's the time when the National Weather Service in Des Moines teams up with Iowa Homeland Security and Emergency Management to educate Iowans about the severe weather dangers that exist in the state. And...yes, Jeff?

**JEFF:** Yeah, that's right.

**STEFANIE:** Monday our topic of the day is flash flooding. Now, Jeff—

**JEFF:** Mmm hmm?

**STEFANIE:** Can you tell me what the difference between a river flood and a flash flood is?

**JEFF:** Well, that's a really good question because I think that there's confusion out there in the public sometimes about what a river flood is versus a flash flood. And really it's a simple – pretty simple thing to distinguish. A river flood is something that goes on over a long time...it's a major river system. Think of it – the water slow to rise, and then slow to fall. [A] classic example would be the 2011 Missouri River flooding that occurred. What, it took three or four months, or five months—

**STEFANIE:** Mmm hmm.

**JEFF:** ...for that whole river flood to occur. Whereas flash flooding is a rapid inundation of a normally dry area with water, usually resulting from heavy rainfall, occasionally other things like a dam failure or something. But most of the time our flash floods are caused by heavy rain and the water rapidly comes up and then rapidly goes back down. Of the two threats – river flood and flash flooding – most deaths occur with a flash flood.

**STEFANIE:** Because people are caught unaware; they don't realize how fast they can be washed away.

**JEFF:** Yeah, pretty much, that hits it on the head. I mean, in a flash flood water is usually quick flowing and people underestimate the power of water. It's very heavy, and if it's moving at [a] pretty good speed, it exerts a lot of force. So—

**STEFANIE:** Even a couple of inches...

**JEFF:** Yeah if you're standing in a very shallow, rapidly-moving water area, it really will knock you down pretty quick. So, you really shouldn't do that. You should avoid driving into flooded areas; that's probably the biggest thing not to do.

**STEFANIE:** Because it can sweep the car away...

**JEFF:** Yeah, it only takes about 18 inches of moving water. Actually, your car is buoyant at first – it kinda acts like a boat. And, unfortunately, it sinks because it's not airtight. So you get into the crick channel and you're moving swiftly along and pretty soon your car sinks and then you have no way of escaping the flood water. About the only thing you could do is try to get a hold of a tree or some other low-hanging object that's not in the floodway. Most of our deaths from flash flooding are occurring from folks getting swept away from rapidly-moving water, and it's even more dangerous at night...

**STEFANIE:** Mmm hmm.

**JEFF:** ...because you can't see the flood waters. All of the sudden you're driving along, you go, you know, into a river bottom – especially in rural areas or even in town – and all of the sudden you're in the crick.

**STEFANIE:** So, basically, people really need to pay attention to the weather and the weather warnings that are issued.

**JEFF:** Absolutely. If you hear a flash flood warning, any time, but especially at night – be very, very cautious when you're driving or moving about. And when you're going through an area that's known to be flash-flood prone – a low area in the road, or near a stream – double check, make sure there's no water over the road because if you don't see it [and] you end up in it, then it could be too late.

**STEFANIE:** Mmm hmm. And can a flash flood affect an area that wouldn't normally think of as flooding?

**JEFF:** Absolutely. They occur in really freaky areas. Depending on the situation, it could be, uh, you know you haven't had a lot of heavy rain for years – and then to get an excessive rainfall event that occurs. And then people describe flash floods occurring where they never thought it was possible.

**STEFANIE:** Like in – like in a street?

**JEFF:** Like in a street, or in a low area, or between houses. And another thing that affects flash flooding is urbanization, or changes in the landscape. If you urbanize a subdivision, that's going to make the water run off quicker and higher. And areas that are recently developed that haven't experienced heavy rainfall – they usually are in for some surprises when they get their first really, really heavy rain.

**STEFANIE:** So, if there is a flash flood...

**JEFF:** Mmm hmm?

**STEFANIE:** ...what are some things that people can do? I mean, the first thing you said, you mentioned, I think, is move to higher ground?

**JEFF:** Yeah, definitely move to higher ground. "Turn around, don't drown," is our saying, and it really makes a lot of sense. Another thing – it's a good precaution, if you're out camping, to not camp right near the stream bed. Always camp a little bit higher up in case there is a flash flood. Because you may not get a warning out in the rural areas – especially if you don't have a weather radio, or if something else happens.

**STEFANIE:** Which you can take with you, because they do have batteries and you can take them camping.

**JEFF:** Oh absolutely. You can, in fact, we recommend taking a weather radio camping. That way you can get the warnings when you're outside in the elements.

**STEFANIE:** Mmm hmm.

**JEFF:** A couple other things that we need to probably cover...one would be a flash flood emergency and what the difference between that and a flash flood warning is. First of all, a flash flood warning is issued whenever we at the National Weather Service think there's a significant risk of flash flooding, and prior to that we often issue a watch. Now a watch means conditions are possible, but not occurring. So there's the difference. Now a flash flood emergency is for an extremely high-end flash flood. That is pretty rare, and it's not exactly defined. But it's a significant threat to life and property occurring or ongoing – we've had reports of it. Good example would be a major dam failure, for instance. Uh, let's say, Lord forbid, a major dam failed above a town and you were going to have a catastrophic flash flood. We would have the warning out already, but then we would highlight that in our statements that this is an actual – a little bit higher-level threat – than even a normal flash flood would be. So, to the listeners out there, just make sure you understand that thunderstorm deaths – the number one cause is, is from a flash flood and not tornadoes or lightning. So, it's a very serious threat, and to be taken seriously.

**STEFANIE:** Thank you for the information.

**JEFF:** You're welcome, Stefanie. Thank you.