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[00:00:00] **Speaker 1** Well. Thank you. Can you just spell your name and say your title for me?

[00:00:04] **Speaker 2** Yeah. The last name is Vaf v r U.S., and I'm the Wisconsin state climatologist and also the co-director of Wicky, the Wisconsin Initiative on Climate Change Impacts.

[00:00:16] **Speaker 1** Awesome. And can you start by just explaining what a climate haven is?

[00:00:19] **Speaker 2** A climate haven is the idea of a place that's a refuge or a safe spot from the impacts of climate change.

[00:00:27] **Speaker 1** Cool. And then what makes Madison suitable for climate migration?

[00:00:31] **Speaker 2** Madison is similar to the rest of Wisconsin in the Great Lakes. It's been hypothesized that this area of the country could be a climate haven, because it might escape the worst of climate change impacts. If there are a lot of other factors that need to be considered before we fall into that conclusion.

[00:00:49] **Speaker 1** Cool. And then can you just talk about how, like, we had a lot of water and a cooler climate and that's what might make us more suitable.

[00:00:55] **Speaker 2** A couple of things that make Madison and Wisconsin in general potentially suitable as a place that's safer from climate change. One is that we have a lot of water, and the other is that we are a relatively cool climate compared to the rest of the country. So those are two advantages. But maybe just as important is what we don't have. We don't have hurricanes, we don't have big wildfires, and we far away from sea level rise. So the combination of those things has made a lot of people speculate that our region of the country could be very attractive to so-called climate migrants.

[00:01:27] **Speaker 1** Thank you. And then what might make Madison not suitable for climate migration?

[00:01:30] **Speaker 2** We have our own challenges. And the idea of a climate haven, implies that it's a safe spot, a refuge. But people should be aware that we have our own climate extremes, our own climate challenges. We get a lot of heavy rainfalls. We get a lot of flooding. We often get heat waves, too, that are hot and humid. And then last summer, we had so much wildfire smoke and that caught people off guard. So those are three in particular challenges that we face here, too.

[00:01:57] **Speaker 1** And then is there anything you are most worried about regarding Madison's climate in the next few years?

[00:02:02] **Speaker 2** I would say most likely it's the flooding and the potentially increased prevalence of heatwaves. For the most part, Wisconsin has escaped the upward trend in extreme heat that other parts of the country in the world have been affected by. But I think our luck is going to run out if the climate keeps warming. So those are a couple of things that are biggest concerns on my head.

[00:02:23] **Speaker 1** And then what kind of influence do the Great Lakes have on our climate?

[00:02:27] **Speaker 2** The Great Lakes have a buffering effect on our climate, especially if you live really close to the shore. So along the in Wisconsin, along the, Lake Michigan shoreline, all the way from about, you know, the Illinois state line up to Door County, definitely cooler in the summer. Definitely cooler in the spring. So there's moderating effects in both seasons and then similarly along the Lake Superior shoreline in northern Wisconsin.

[00:02:52] **Speaker 1** Thank you. And then can you talk to me a bit about the uncertainty surrounding the concept of climate change?

[00:02:57] **Speaker 2** And one of the reasons that climate havens are uncertain is because there's so many reasons why people move or don't move, and climate and weather are just one of them. The cost of living, the quality of education, the availability of housing. This is a big issue in Madison with high house prices and rents. And so that'll affect people too. And also things like how far away they are from family and friends. Typically people don't move very far when they do decide to relocate. It's typically in the same general region of the country. So it's it's somewhat unusual for people to uproot from, say, California, if they're afraid of wildfires moving all the way to Wisconsin.

[00:03:40] **Speaker 1** And then why should everyday people care about climate change in the concept of climate havens?

[00:03:45] **Speaker 2** Well, depending on where you live, it's climate change is affecting all of us in different ways. And if it gets too hot for you or you get, to, to, concerned about sea level rise or wildfires, you may face a decision yourself. Is it time to uproot and go somewhere safer. And so that would be one reason for people affected. But then for communities who may potentially be climate havens, there's the concern. How do we handle a potentially large influx of residents? And that is something that communities need to be thinking about. Could we handle a 15, 20, 25% increase in people moving here because they're afraid of climate change impacts in their area of the country?

[00:04:25] **Speaker 1** Thank you. And then, can you just expand about a bit about that? What kind of other things should cities be considering when preparing for climate migration?

[00:04:34] **Speaker 2** Well, the the ability to have affordable housing, I think is a big one. Can their infrastructure handle a lot more people? Those sorts of things. So these are things that communities need to be thinking about anyway. But conceivably there could be an uptick in, people moving in or out of different communities. And, another thing that that certain communities are thinking about in the upper Midwest is promoting them. As climate havens. For instance, Buffalo and Duluth are two communities that have gone all in with advertising and encouraging people to come to their communities, and hopefully they have the ability to take in a lot of residents fairly quickly.

[00:05:14] **Speaker 1** And then Madison has it really brand itself, like Duluth or Buffalo. Do you think it should try to bring its over to kind of, you know.

[00:05:20] **Speaker 2** I think there's pros and cons with, promoting yourself as a climate haven. First of all, you have to be honest because are you really a refuge if you're not? I think you're being misleading. And you don't want to falsely advertise. The other thing, too, is asking yourself the question of, you know, can we handle a lot of people coming in at once? It's, you know, it's potentially good for the economy, but it can also be a drain on services. And if people have to live outside of Madison, does that mean because of affordable housing, does that mean that you can have a lot more traffic coming in and out of the city every day?

[00:05:55] **Speaker 1** And then, are there any specific places that you think climate migrants might already be leaving or will be leaving soon? And how does Madison compare with these places?

[00:06:03] **Speaker 2** Well, a couple of high profile examples in the last 20 years was Hurricane Katrina that devastated New Orleans. There were a lot of people who permanently moved from New Orleans back then. And another one was Superstorm Sandy in 2012 that hit the New York, new Jersey East Coast area badly. And there were people who did move in both of those instances. But there are lessons to be learned. FEMA statistics show that the people who left New Orleans generally did not move very far away. They often went to Houston or Mobile. Some went farther away, but typically they stayed fairly close to New Orleans and are still susceptible to hurricanes. So that shows the draw that local local culture has and ties to family and friends have.

[00:06:48] **Speaker 1** Thank you. And then when do people start talking about climate events or when did that idea start to get on your radar?

[00:06:54] **Speaker 2** This idea of climate haven seems to have taken off from the bottom up. This is something that I don't think scientists anticipated would would draw so much public interest. I would say in my own experience, it's just in the last five, six, seven years that I've been hearing about it a lot. And it's a largely when I go to give public talks, I hear people asking these questions about climate havens and refuges. And so it's something that that was really kind of a groundswell of interest from the, the masses. And that's caught the attention of a lot of climatologists.

[00:07:27] **Speaker 1** And from your personal perspective, do you think that Madison has the potential of the kind of climate in.

[00:07:32] **Speaker 2** Madison always will be a popular place to live? It's always considered one of the best places in the country to live, and probably will remain that way. So in that sense, it'll always be a draw. And to the extent that Wisconsin's climate change impacts may not be as severe as some other parts of the country, I think it may have a double draw. But again, people need to recognize that we've got our own challenges when it comes to climate and extreme weather here, too, that there's really no safe place, from the impacts of climate change.

[00:08:02] **Speaker 1** Thank you. And then my last question is, just do you think people are already moving because of climate migration, or do you think that we'll see an increase soon in what that time frame might look like?

[00:08:11] **Speaker 2** It's a mixed bag in terms of whether people are moving because of climate change. You can certainly find anecdotal evidence if you talk to a person and they say, yeah, I moved because it was too hot in Arizona and I wanted to be somewhere cooler. But usually people have a mix of reasons for leaving. Maybe they found a better job. Maybe they decided that, they wanted to be closer to family. There's all sorts of different reasons, and weather and climate may be one of them. But if it's one of many, how do you decide? Was it really because of the climate change, or was it just climate was just one of many factors that motivated them to to become, to displace themselves.

[00:08:47] **Speaker 1** Thank you. That was great. Is there anything else you want to touch on or expand upon?

[00:08:51] **Speaker 2** I think so, I think we covered quite a bit there and then.

[00:08:54] **Speaker 1** Is there any questions you might want to ask?

[00:08:56] **Speaker 3** No, I think that was a good point. I have a couple of thoughts. Okay. Sure. Okay.

[00:09:00] **Speaker 2** So I look at you there.

[00:09:01] **Speaker 3** Look at this. Okay. Yeah. So, my first question and you kind of talked about this, but is our weather really going to be like that much in 20 years? Is our weather really going to be that much better than California's or Texas as well?

[00:09:16] **Speaker 2** Yeah. Forecasting 20 years in advance is difficult, but we do expect that the trend toward warmer and wetter conditions in Wisconsin will continue. That's been the long term trend in every season, and it's likely to continue in every season in the future. Even if it gets hotter here in Wisconsin, it's still won't be as hot on average as places like Texas, California and Arizona. But it will in many places. It'll be a lot wetter. And so potentially flooding problems will be a bigger concern here.

[00:09:45] **Speaker 3** Okay, I got one more to. Let's say that this kind of migration thing does pan out. And people, you know, we do see this phenomenon, you know, solidified into whatever you want to say. What part of the state do you think would see the most migrants? Do you think they would go farther north to try to mitigate, you know, concerns as much as possible, or they go towards a more densely populated southeast.

[00:10:08] **Speaker 2** Where people move is going to depend on a lot of things, depending in part, what kind of climate they like. If you like snow, you might migrate to the snow belt around Lake Superior, which will still have, more snow than the rest of the state, most likely, if you want to avoid the heat of summer, I think areas near the Great Lakes could be very desirable, because those areas do stay cooler with lake breezes and slower warm ups in the spring. Not as many hot 9000 degree days in those areas. So, if you wanted to escape heat, that would be a good one. But again, there's so many different reasons why people might choose to live in one part of the state or another. If you like urban places, Milwaukee, Madison, green Bay, or more attractive, if you like rural areas, there's plenty to choose from. So, climate would be one of the reasons, but you certainly could figure out, depending on your own personal tastes for weather and climate, which parts of Wisconsin would be most desirable for you?

[00:11:03] **Speaker 3** All right. I'm sorry. Hang up a.

[00:11:04] **Speaker 1** Little bit.

[00:11:04] **Speaker 2** More. Sure.

[00:11:05] **Speaker 3** Sorry. I like to do this. This probably is not going to end up in her story, but I like to do this when I'm talking to experts who have kind of a longer. If you like this, what is your gut tell you? It's going to happen with climate refugees. Just just gut feeling. Do you think we're going to see people come?

[00:11:25] **Speaker 2** I think that there will be some segment of the population that relocates because of climate change. And I think probably it will be for, you know, for reasons that we can anticipate that they don't want to deal with, sea level rise problems, hurricanes, wildfires and the, like, extreme heat. But I think it's going to be sort of lost in the mix in many cases because people are going to move to and from Wisconsin and the Great Lakes areas for all sorts of reasons. So, finding the signal amid that noise of people from coming and going all the time anyway, I think it's going to prove difficult.

[00:12:01] **Speaker 3** Okay.

[00:12:01] **Speaker 1** That's actually I actually have one more question.

[00:12:03] **Speaker 2** Sure. As long as we're set up. Yeah.

[00:12:05] **Speaker 1** Could you talk a bit about, like, the flooding we saw in Dade County or any other like, disasters like that that we've seen recently?

[00:12:12] **Speaker 2** Sure. So the 20 teens were Wisconsin's wettest decade on record by far. And we had a lot of flooding events across the state in that decade. And one of the worst, maybe the worst in that decade was, in 2018, in August in Dane County, where just about a foot of rain fell in 24 hours, which was a statewide record. And it's an incredible amount of rain. It's more like hurricane amounts. And, it it certainly caused terrible flooding. It even caused one fatality. And we do expect in a warmer climate, because warmer air can hold more moisture, that when conditions are right, we'll see heavier doses of rainfall. And that's one of the big concerns with climate change. Climate models have been consistent with that expectation for years. And so we may be seeing some of that signal of climate change being realized already in Wisconsin in terms of these flooding events.

[00:13:06] **Speaker 1** Thank you so much.

[00:13:08] **Speaker 3** We just, 20s of room tone of silence, if that's okay. Okay. Starting now. Okay. Thank you.