

“On The Mississippi, A Battle Of The Levees” Transcript

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IRA FLATOW: Now it's time to check in on the state of science. [RADIO CHATTER]

That's where we look at local stories in communities around the nation. And as we've seen from Harvey, coastal flooding may become the new normal. But it's not only cities on the seaboard that need a flood plan. Places like St. Louis, along the Mississippi, are also seeing more floods. Levees are a central part of their flood plan. But how to build them? Well, that's not a straightforward answer. And it's created a levee war-- a levee war in the area. Here to bring us that story is Eli Chen, science and environment reporter at St. Louis Public Radio. Good to talk with you here again, Eli.

ELI CHEN: Hey, thanks for having me, Ira.

FLATOW: Let's talk about what's going on over there. We usually talk about flooding along the coast, like we have been all week. Can you give us some context about how flooding has increased in the Missouri area?

CHEN: Yes. So flooding has increased along the Mississippi River. And it really depends on what part of the Mississippi that you're talking about. Residents along the Merrimack River near St. Louis-- that's a tributary of the Mississippi- they've experienced two major floods in the span of less than 18 months. That's December 2015 and May 2017. And that's not a whole lot of time to recover.

And I've been also reporting upstream from that area in Northeast Missouri, where farmers along the floodplain-- they know there are some risks in farming that close to the river, but historically, they've experienced a flood every 15 years. And since 2008, they've actually experienced five pretty significant floods. So that's a huge increase.

And about last year, there was a study done by Washington University that showed that Midwestern flood water levels are actually increasing 10 times faster than sea level rise. And partly that's due to climate change, but it's also primarily because of engineering along the rivers.

FLATOW: And when you say "engineering," do you mean building of the levees?

CHEN: Yeah.

FLATOW: Tell us how that contributes to it.

CHEN: Yeah. So the idea of building levees know is to protect infrastructure like sewage treatment plants, communities, roads, things we value. But increasingly, it's been shown that levees really just protect what's behind them, as many environmental experts have told me. And what happens when you build levees along rivers is that they constrict them.

And I spoke to a geologist at the University of California Davis named Nicholas Pinter, who put that pretty eloquently.

NICHOLAS PINTER: It's like an eight-lane highway, and you're constricting the water to a single lane. So it's inevitable that things get clogged up.

FLATOW: So this is what's happening in Missouri.

CHEN: Yeah. So basically, what he's saying is that these levees push the water up higher, and so they run up higher and faster, and they're increasing flood damage along these communities.

FLATOW: So actually, I understand that this has created a levee arms race, if you will.

CHEN: Yeah. So what you're referring to is something called levee wars, where in the past, know a landowner would build up a levee to protect his property. But then that would push floodwaters onto another person's property, so they built another levee that's even higher, and it creates this really bad cycle. So the Army Corps of Engineers-- what they do is they authorize levees to be built up to certain levels so that this sort of situation doesn't happen, that people shouldn't be built up to past regulation, rather.

But where I've been reporting, which is in the Army Corps Rock Island District, which is a section of the river between Central Iowa and St. Louis-- a lot of the levees have been shown to surpass regulation. And basically, within the Rock Island District, there are these drainage districts that maintain and they manage these levees. And if they know a storm is coming, they'll build up a levee higher to protect communities from those floodwaters. Sometimes they won't take that height down.

And furthermore, they might build up levees to try and get accreditation from FEMA. Because their interest is to protect the assets behind the levees. And they want to get this accreditation so that the people behind those levees don't have to pay for flood insurance. They can pay for lower premiums.

FLATOW: I see the levee war. I see what you're talking about. Thank you, Eli. Have a good holiday weekend.

CHEN: You too. Thank you.

FLATOW: Eli Chen, science and environment reporter at St. Louis Public Radio in St. Louis, Missouri.

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