Welcome to Level Up, a FEMA audio project for practitioners where communities share their stories about building resilience and reducing risk from a disaster.

When you ask emergency managers and city planners what they need to make their community more resilient to disaster, most have the same answer: money. Securing funding to get projects done can be time-consuming and even if you are awarded a grant, your town is usually on the hook for a portion of the project cost.

Xing Liu, a hazard mitigation city planner with FEMA, spoke with Carolyn Steffan of the City of Tehama because she did something amazing: She stitched together funding from multiple sources to cover the cost of elevating 39 homes in her city to protect residents from flooding.

Can you tell us about the City of Tehama?

The City of Tehama is a very small, mostly residential and agriculture community. We had one mini-mart, as far as being a business in the City of Tehama, which just recently burned this year. So, we have very little source of sales tax, which most cities are supported by.

The real constraint for the City of Tehama is that we are entirely the platte area, which is where the houses are, within either a floodway or a floodplain. And we have special permission from FEMA to be able to build houses in Tehama because there are so few vacant lots left.

But yeah, we’re, we’re a low-budget community and the grants that we apply for actually enable us to survive.

Every single one of the City of Tehama’s 195 homes is at risk of flooding, and the city has very little tax revenue that could be used to make the city more resilient to disasters.

Previously, the Army Corps of Engineers came to the Tehama City Council with a proposal for how to reduce their risk. What did they want to do?

They said that it would be cost-effective to build a “Ring Levee” around the City of Tehama. The only catch was, they would build it, and we would have to maintain it. And my philosophy has always been, “Don’t take funds to do what you can’t afford to maintain,” because our little city could never maintain a levee. The other thing is, a levee would really change Tehama. All the houses along the river would have to be relocated or demolished. And the river is one of the large reasons that many residents live in Tehama. So, those residents I know would oppose a “Ring Levee.”

So, we talked to them about how some of the older houses had been raised a long time ago, and how there was no problem with flooding with those homes. So, we asked them if they could go back and do a nonstructural study.
And the nonstructural study did show that it was feasible, and that there would be funding to elevate homes under Section 205 of the Flood Control Act of 1948.

Voice-over: All you really need to know about section 205 of the Flood Control Act is that it allows the Army Corps of Engineers to fund 65 percent of small-scale flood control projects - the city has to come up with the rest of the money.

Carolyn Steffan, City of Tehama: So, we went to the Reclamation Board and pleaded our case. And they agreed to fund 25 percent. So, that left 10 percent that we would have to fund locally. Well, the City of Tehama couldn’t afford to do that. So, it was decided that each participant in Tehama would have to come up with the 10 percent. And, so, that’s the way we proceeded ... 65 percent Army Corps, 25 percent Reclamation Board, 10 percent local person.

Xing Liu, FEMA: So, the Reclamation Board funding is “State-level” funding?

Carolyn Steffan, City of Tehama: That was State-level funding. Right. So that was considered a local match. And then once we had the funding all in place, what we had to do was to develop and create guidelines, and rules and regulations for the entire project. That took a long time.

Voice-over: Even though the study had been completed in 2001, we weren’t able to raise the first house until 2005. It took that long to do all the negotiations.

Carolyn Steffan, City of Tehama: So, for low-income people, CDBG picked up their 10 percent, so that wasn’t a problem.

Voice-over: One funding option to assist the lower income residents are Community Development Block Grants, or CDBGs, administered through the U.S. Department of Housing and Urban Development. They support projects that make communities safer and more livable for low income residents. This funding is also more flexible compared to other grant programs, in part because it does not carry the same cost-share requirements that apply to most federal grants.

Xing Liu, FEMA: As the project was conceived, how was it communicated to the public? How did you explain what was going to happen to the people, including this complicated funding mechanism you were going to get?
Carolyn Steffan, City of Tehama

We had kind of done a survey of how many people would be interested in elevating. And then, once the contract was signed, the Army Corps, and there was a representative from the Rec Board, they actually came to Tehama, and we had a big Town Hall meeting.

So, they prepared a map that showed all of the existing houses, what their elevation was, what it would require to go to the “Army Corps level” that would be required, and answered everybody’s individual questions, took everybody up to the map, showed them where their house was, what it would mean, how high they would have to raise it.

And I think everybody thoroughly understood what they were getting into and were very anxious to get their homes on the list.

Voice-over

There are small communities all over the U.S. grappling with how to fund projects that reduce risk to disaster, and many have looked to the City of Tehama’s success at stitching together funding as an example of how to get that done.

Xing Liu, FEMA

So, since you created the process, it’s now available to be used by other communities that are pursuing similar projects nationwide. What advice would you give to those communities as they try and tackle their own flood risk?

Carolyn Steffan, City of Tehama

When you work with multiple agencies, or where there aren’t guidelines already in place, you have to have patience, and you have to have perseverance. It was difficult to get agreement between Army Corps and the Reclamation Board, and for it to be acceptable to the city, and many times, it would have been just easy to say, you know, walk away from the table.

Like one of the little things, problems that we had to work through, was cost-to-benefit ratio. You know, they won’t do a project, just like OES or FEMA won’t, unless there’s a cost-to-benefit. And, when they did the Ring Levee concept, it was based on a cost-to-benefit ratio for the entire community. When we started this project, they wanted to do a cost-to-benefit of each house that we were going to elevate, which would have really slowed things down and made it difficult. And so, we pleaded the case that, "You weren’t going to make us to do that when you did the Ring Levee. Why are you doing that now?" And, finally, they backed down and allowed us to proceed without doing a cost-to-benefit on each individual house.

Voice-over

Stitching together funding and negotiating the parameters of the cost-benefit analysis were not the only ways in which the City of Tehama made funding systems work for them. They also streamlined their project design whenever possible. This lowered costs and expedited the construction process of elevating homes.

Carolyn Steffan, City of Tehama

The Army Corps had what they approved as a good foundation plan. And so, by working then with the Tehama County Building Department, we were able to use that diagram to do all of the foundations.

Otherwise, we would’ve had to engineer each foundation and that would have cost a lot more and delayed elevations.

Xing Liu, FEMA

Mmhm.
Carolyn Steffan, City of Tehama

So, that was another thing that by working between the agencies we were able to expedite something.

The other thing that we did was, we used the person that was doing all the CDBG write-ups “on the side” to do all the private-pay write-ups. So, we had consistency.

So, things like that, we were able to work out as we went along to make things work smoother. Any time we came up with something like that, we had to get approval from Rec Board and approval from Army Corps.

Xing Liu, FEMA

That’s simply incredible. It’s not just the creativity that went into it, but also the perseverance to decide to stick with it ‘til the end and work through all the hurdles.

Carolyn Steffan, City of Tehama

You have to understand, too, that I had a full-time job, not as City Clerk. I was, at the time, I was Superintendent of the School District. So, when I took these trips to Sacramento, I used vacation days, you know, so I, I donated a lot of my time and effort.

Xing Liu, FEMA

How did you stay motivated through this long and complicated process?

Carolyn Steffan, City of Tehama

Well you just have to do that. And … [Xing chuckles] … this was like kind of “a once in a career” opportunity or a “once in a lifetime” opportunity to help my community, and I felt it was that important.

I also elevated my house as part of this project.

Xing Liu, FEMA

Oh, okay!

So it’s been 15 years since the first batch of homes have been elevated. Have you seen flooding since then, and have you seen the results of what this project has been able to bring?

Carolyn Steffan, City of Tehama

We haven’t had, you know, a high-depth flood. But what I will say is, that when we see the river rising and, you know, we get the predictions out to people, people that have their houses elevated, there’s a whole psychological benefit there. They’re not worried and not moving their furniture to higher ground. And so, I think that’s a real benefit.

Xing Liu, FEMA

You’ve been really, really resourceful at coming up with ways to help your community do better and thrive and not just be safe now but for decades to come. Congratulations!

Carolyn Steffan, City of Tehama

Yeah, we like to show off what we’ve done. We really do. We’re proud of it. We’ve accomplished a lot for a little city.
Voice-over

To recap, Carolyn’s three big tips for funding mitigation projects are:

- Only build what you’re able to maintain.
- Find operational efficiencies to streamline efforts throughout the process.
- Be creative and push the boundaries of the agencies and people you’re working with and getting funding from.

If you’d like to learn more about hazard mitigation, go to FEMA.gov and search “hazard mitigation.”

This episode of Level Up was produced by FEMA Region IX’s Mitigation Division and Resilience Action Partners. Your host is Xing Liu. Special thanks to Carolyn Steffan from the City of Tehama for sharing her story of getting a mitigation project funded and implemented in her community.