

# Level Up Audio Project – Episode 4

## Flood Mitigation and Streambed Permitting: Solano County Water Agency

- Voice-over Welcome to *Level Up*, a FEMA audio project for practitioners where communities share their stories about building resilience and reducing risk from a disaster.
- Stream beds are vital ecosystems that can both serve and threaten the communities they run through. On one hand, clearing them out can harm plants and animals who depend on that habitat and make flooding worse downstream. On the other hand, leaving them alone can make fires worse or create a backup of water, increasing floods upstream. So they must be maintained, and maintenance work requires a whole host of expensive permits. In California, some communities are taking new approaches to make it easier for landowners to get the necessary permits and funding to do streambed maintenance and flood control projects. My colleague Jesse Carpentier interviewed Roland Sanford of the Solano County Water Agency to hear about the micro-grant program that the water agency implemented to make these permits more accessible.
- Jesse Carpentier, FEMA Can you give me an overview of what you do and how you got involved in streamlining the permitting process in your town?
- Roland Sanford, Solano County Water Agency I am the general manager of the Solano County Water Agency. The agency has a water supply function, as well as a flood control function. In the course of this discussion is dealing well on the flood control side.
- Solano County is still experiencing a quite a bit of urban growth, but it's still predominantly a rural county. And many of the flooding problems that we face in the rural areas tend to be sparsely populated areas of the county where there is flooding, more often than not.
- Jesse Carpentier, FEMA So tell me how the permitting process works, from a homeowner's perspective. Like, if I lived in Solano County, what kind of things might I need a permit to do?
- Roland Sanford, Solano County Water Agency Certainly anything involving a, a stream channel is almost instantly going to, to trigger, a California Department of Fish and Wildlife streambed alteration agreement, quite possibly, something from the regional water quality control board. We do, for example, little flood detention basins and whatnot that involve grading. And so, quite often there's a county grading permit that is also needed.
- Voice-over Despite being difficult to navigate, these permits serve an important function. When property owners break ground without consulting all the proper agencies, they can put themselves or their neighbors at higher risk to flooding and other natural hazards.
- Roland Sanford, Solano County Water Agency Well during the, uh the, the 6-year drought between 1987 and 1992, of course it was a very, very severe drought. We had a landowner that came to the area in about 1988. Built a home in basically the low spot of a field; 1993 rolls around, and it's a relatively wet year. And the house floods. And the landowner's comment is that "I've lived here

for 5 years and I've never seen it flood like this." And it's like, well, unlucky for you, you got here in the beginning of the worst 6-year drought on record and now it's finally rained. And so, we do have situations where landowner maybe isn't fully aware of the potential for flooding. It may not be, you know, quite obvious.

Voice-over

When a property owner sets out to reduce flooding on their own, they face steep costs, and they run the risk of exacerbating another problem, like damaging endangered species habitats. So, in the '90s, the Solano County Flood Control District created a microgrant program for property owners that would simplify the permitting process and help with the cost of flood control measures on private property.

Roland Sanford,  
Solano County  
Water Agency

The water agency, we allocate funding for the small grant program. It's primarily focused on rural landowners, and we provide grant projects for anything from detention basins to sediment retention ponds, creation of, of small drainage swales or building up of small levees. We also do fund some of the feasibility studies. Sometimes you need to do a little bit of an engineering study before you can actually formulate a project. And so, we have a grant application that, that one can download. We contract with the Solano resource conservation district to sit down with the landowners, help them fill out the application and, and--more importantly--to help them formulate a project that we are reasonably certain will be viable, certainly from a regulatory permitting standpoint and better yet, formulate the project in a way that it's most likely to be expeditiously permitted.

We also obtain on their behalf any necessary permits. I think that's obviously a big part for the landowners. The small grant program, we will typically fund up to 80 percent of the total cost. Most of these projects have been, many have been under \$10,000, but the vast majority are under \$20,000.

Voice-over

Solano County is not the only California county grappling with the "whack-a-mole" process of planning and implementing flood and fire control projects in streams. In 2013, Solano's neighboring county, Napa, created a stream maintenance manual that sets out clear guidelines for how to do routine maintenance and flood control projects in and near streams in Napa County.

Napa County also went a step further: For work that abides by the manual, the county pre-acquired permits -- from California Department of Wildlife, United States Army Corps of Engineers, and water board permits. So, if a Napa County property owner is following the manual, they can do maintenance and small-scale flood control projects under these pre-approved permits.

Jesse Carpentier,  
FEMA

Can you talk about the relationship between this project and the similar project in Napa County and maybe how this approach could be applied to other counties in Northern California?

Roland Sanford,  
Solano County  
Water Agency

What we'd like to do in the future here is to emulate what Napa County has done, where if you as a landowner have a certain type of project, maybe debris removal, it's already been permitted from a programmatic perspective, and that's what streamlines the whole permitting process. And the idea is just to assist landowners because, in many cases, particularly where, you know, the active farming is going on, the landowners often have the equipment and the ability to pull debris and, and fallen trees out, but they are thwarted by the permitting.

And so, it's like, well, if we can set up this streamlined permitting process through this stream channel maintenance program, then it would be a situation where more landowners would be able to essentially do the job with little involvement by us.

Jesse Carpentier,  
FEMA

What are the first three steps another county or water agency would want to take to start a similar project?

Roland Sanford,  
Solano County  
Water Agency

You really need to have secure funding. I would think it would be very difficult for an agency to implement a program like this that, say, was grant funded. Our funding is, is basically as a special district, we get a portion of the county-wide property tax and so we have pretty secure funding for this and that's, that's critical. I would say, again, getting back to educating landowners on the regulatory process, that really is important.

You know, some landowners, are like, what do you mean? I can't run my bulldozer down the creek? You know, I'll just do it tomorrow. So educating them on what are the realities is what you can do, cannot do. Setting their expectations in terms of the length of time required to get permits and, and why, you know, it is important to, say in May, to be thinking about a flood control project that you want done before the next rainy season. For a lot of people like, well, we just ended the rainy season, I'll, I'll think about it, you know, 2 weeks before the first rains. Like, well, that's not gonna work.

If there are ways to incorporate habitat enhancement, you know, whether it's fish or wildlife, into a project, that certainly helps a lot when dealing with the resource agencies. You know, Cal Fish and Wildlife and US Fish and Wildlife. If there are elements that you can incorporate into a project, that does help a lot in many cases with respect to getting the permits.

Voice-over

Just to recap, Roland's four main tips for simplifying the permitting process for hazard mitigation projects are:

- Secure political support through a secure funding stream.
- Set landowner expectations early and often.
- When possible, incorporate project elements that not only reduce flood risk, but also enhance habitat or provide other benefits like recreational areas.
- Know your risks - formally identify stream problem points from the get-go, so that permits can address those specific locations in the future.

If you're interested in learning more about how Solano County Water Agency's work on permit streamlining, you can go to [www.SCWA2.com](http://www.SCWA2.com).

If you are interested in learning 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 Jesse Carpentier of FEMA Region IX. Special thanks to Roland Sanford of the Solano County Water District for providing this interview about his work on the stream maintenance small grant program.