

## Podcast Transcript: Campaign Promotes Eating Safer Fish

[Theme music]

**Ashley Ahearn (AA):** You're listening to Environmental Health Chat – a show from the National Institute of Environmental Health Sciences that explores the connections between our health and our world.

I'm Ashley Ahearn.

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The Cape Fear River of North Carolina is polluted. Over the years, cement plants, fertilizer plants, creosote plants, chemical plants, and other industrial facilities have sprung up along its banks. There's mercury, arsenic, and other chemicals in the water – and some of those chemicals end up in the fish that are caught there.

But the Cape Fear River is also very important to the people who live in that watershed. Veronica Carter is one of them.

**Veronica Carter (VC):** The river is life, you know, not just in our state, but anywhere there's freshwater, there's going to be life.

**AA:** Carter has been living in the Cape Fear watershed for almost 20 years. She's on the board of the North Carolina Coastal Federation, a nonprofit organization focused on protecting and restoring the North Carolina coast. But Carter came to environmental activism later on in life.

**VC:** I'm a retired military officer. When I was a young lieutenant, I asked a Sergeant Major – which is the highest enlisted rank in the army – what I could do to be a good officer, and he said: "If you want to be a good officer, you never walk by a mistake." We made a lot of mistakes in the Cape Fear River, our ancestors made a lot of mistakes. It's time not to walk by those mistakes, it's time to try to fix them.

**AA:** So, in partnership with other activist groups and academic institutions, Carter is fighting to clean up the Cape Fear River and protect the people who catch and eat the fish there.

**VC:** They've got largemouth, bass, catfish, red drum, bluegill, speckled trout, spot, shad, and depending on how close you are down, getting closer and closer to the ocean, blue crab and some shrimp.

**AA:** For many of the people fishing the Cape Fear River, it's not a hobby, it's an important source of protein – especially in the Latino and African American communities – and for those struggling with food insecurity.

**VC:** They come from, I think, all walks of life but the ones that seem to take the fish home probably are from a lower socioeconomic status. Sometimes they're walking home or sometimes you know you look at the car that they get into and realize okay, they've had their car for a while, it's not the newest car, but they're probably taking that home to help subsidize their diet for the week.

**AA:** A few years ago, Carter and the North Carolina Coastal Federation had joined forces with other environmental groups in the Cape Fear watershed to fight a proposed cement plant that would have been built along the river not far from lower-income communities of color – some of whom fished in the river.

She was taking state and federal environmental regulators out on the river to show them where the cement plant was proposed to be built. And they noticed families fishing along the riverbanks.

**VC:** And I think one of the regulators said: “Are those people fishing, they just do catch and release, right?” And I looked at the family and said: “No, those are families that look like they’re probably taking those fish home.” And they looked at me and said: “But you said the water’s polluted.” I said, “It is – and this is a problem.” And they said, “Yeah, it is,” they said, “Do you have any scientific studies that show that people are actually eating the fish out of the river? Or is this all anecdotal?” Well, of course, it’s all anecdotal. We had absolutely no studies. So, we went and did a literature review – they’re like okay, that’s number one. Number two [they asked] “Do you know that the fish are impaired? Do you know that definitely these fish have something that was caused by previous contaminants that were in water?” “Ehhhh....not exactly.”

**AA:** Carter and her coalition knew they needed science to answer those questions to make a strong case against the new cement plant – and ultimately protect the people fishing in the Cape Fear River.

**VC:** But then we got together with good ol’ Liz, and the folks from the Duke Superfund Advisory Group, and that was it. That was that was the synergy, the simpatico relationship we needed.

**AA:** “Good ol’ Liz” is Elizabeth Shapiro-Garza. She’s an associate professor at the Nicholas School of the Environment at Duke University and director of the Community Engagement Core within the Superfund Research Program Center at Duke.

**Elizabeth “Liz” Shapiro-Garza (LS-G):** So that’s how we got involved, was really that this was obviously a community concern. It was related to the issues that we focus on at the Duke University Superfund Research Center, which has to do with early life exposures to chemical contaminants and then later life health consequences.

**AA:** Consuming contaminated fish can be particularly dangerous those who are pregnant or breastfeeding because they can pass the contaminants on to their children whose bodies are still developing.

The NIEHS funds more than 20 Superfund Research Centers like the one at Duke around the country. The community engagement core is a critical part of the way the centers are designed.

**LS-G:** So, we kind of serve as interpreters for what the interest and need is at the community level. But then also that the research that gets done at the centers is translated back to communities in ways that they can use for improving their environmental health, for advocacy, however they want to use it.

**AA:** As Veronica Carter said – the Cape Fear coalition needed a scientific understanding of who was eating fish from the river and what was in the fish they were eating. So, Shapiro-Garza and

her team worked closely with Carter and her colleagues to design a survey and conduct interviews with people fishing along the banks of the Cape Fear River.

**LS-G:** The information that we had been able to gather from the surveys that we did and the key actor interviews that we did about what species of fish people were eating out of the lower Cape Fear River, and where they were catching them, were then used to design a study to measure and test the types of chemical contaminants found in those particular fish species from the spots where people were actually catching them to eat.

**AA:** In collaboration with Dr. Mozhgon Rajae from Oakland University, they tested the fish for PCBs, dioxins, and heavy metals. Sure enough, the fish had high enough levels of mercury and chromium to pose serious health risks. As a result of this research, the state of North Carolina set new fish consumption advisories for those areas.

Okay, so they figured out where people were fishing and what was in the fish... but then the question became: What do you do with those results? What is the behavioral response you're looking for from community members?

**LS-G:** And in the case of our bankside survey, what we found was that people said, "I would be willing to change a lot of different behavior. I'd be willing to eat and catch different types of fish. I'd be willing, potentially, to even eat less. That's a possibility as well. But I am *never* going to stop fishing from the Cape Fear River and eating the fish that I catch – I might eat less of it but I'm still going to keep eating my catch."

**AA:** Shapiro-Garza and her team used what they learned from the surveys to work with Carter and her coalition to develop what's called the Stop, Check, Enjoy! campaign.

**LS-G:** We want you to stop and inform yourself about what types of fish are safe to eat, and how much is safe to eat. So that's stop. And then check those advisories, those fish consumption advisories to understand what is safe. And then enjoy. Right once you know what is safe to eat, you can enjoy it.

**AA:** That last part – "enjoy" – was a key element of the campaign. People in the Cape Fear watershed have attachments to certain kinds of fish – like catfish, which is a favorite for family fish fries in the surrounding communities. Unfortunately, as a bottom feeder, catfish often has higher concentrations of harmful chemicals. Frying it is also not ideal because fat-loving pollutants, like PCBs and dioxins, concentrate in the fry oil. Carter knew it was going to be tough to get people to abandon cultural traditions around certain kinds of fish and how to prepare them.

**VC:** It's one thing to say "don't eat this fish, eat that fish," but if the other fish tastes better, you're probably not going to want to eat the healthier fish. So, we're like, if we're going to get people to eat this it's got to taste good. How do we do that? I know! I know a couple of chefs who are activists who are also out in the community and are actually well known. Maybe they'll hook us up and tell us how to make this stuff taste better.

**AA:** Two well-loved chefs from Wilmington – Dean Neff and Keith Rhodes – offered to help develop some recipes.

**VC:** And that's where the idea for calendar came up. We're like, okay, let's do a calendar and every month we'll have a different recipe using the better fish.

So, I'm sitting here with my calendar from 2021-2022 and looking at the different recipes. And here's North Carolina shrimp jambalaya, that's one of the recipes. Fish or shrimp cakes, grilled red drum – and note that I said grilled not fried. And so those are the kinds of things...ceviche – whoo, okay, now we're getting fancy. Yeah, pan fried chowder, grilled shad. And so those are some of the recipes that we include, and they're there on the website as well. And that way, it's not just don't eat this fish because it's bad, because that's not going to get it. It's like eat this fish instead of that fish because it's healthier.

**AA:** The calendars were a huge success – and were translated into Spanish as well to reach more of the folks fishing in the surrounding communities. The coalition also gave them away at public events where the chefs did cooking demos and showed people how to filet fish in order to remove more of the fat and skin where harmful chemicals can concentrate.

They also designed fans and fridge magnets with the Stop, Check, Enjoy! slogan on them - which was based on suggestions they got from the community. And they got the word out through local radio and TV ads, promotional videos, and a social media campaign.

Now, the Stop, Check, Enjoy! campaign has reached people up and down the Cape Fear River. And both Shapiro-Garza and Carter believe it was a success because it combined good science with a deep commitment to the community and its needs. The science – and the scientists, like Shapiro-Garza – were responsive to the community and adapted their research to best serve them.

That, for Veronica Carter, is what it means to never walk by a mistake – as her military mentor once told her – but rather to take action and form partnerships that pave the way for change.

**VC:** One of the things I've started doing now is trying to tell community activists don't be afraid. We have some great scientists out there. Use them! Connect with them! See if they'll help you, tell them what your plans are. That's what Liz's group does. They bring together community activists with academics. That's one of their whole reasons for being. And so the fact that they're already set up to do that, and understand how to do make those partnerships and reach out to the academic side and connect them with the community side, where there's this, you know, everybody wins thing at the end. That, to me is how this is all supposed to work.

**AA:** It was through that partnership – between academics like Liz Shapiro-Garza, and activists like Veronica Carter – that the proposed cement plant was stopped, more fish advisories were posted along polluted parts of the Cape Fear River, and people in the surrounding communities learned new ways to safely prepare the fish they love to catch and share with their families.

**[Music comes up]**

I'm Ashley Ahearn. Thanks for listening to Environmental Health Chat.