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TOP STORY

Virginia Tech team gets EPA grant to engineer citizen-science water quality project

By Robby Korth robby.korth@roanoke.com (540) 381-1679 Apr 25, 2018



Professor Marc Edwards and his Virginia Tech research team detected dangerous levels of lead in the public water supply that served residents of Flint, Michigan.

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Virginia Tech's Flint Water Study Team will take its influential scientific detective work to more communities, thanks to an Environmental Protection Agency grant.

University Professor Marc Edwards received a nearly \$2 million grant from the EPA to detect and control lead levels in public drinking water, while getting community members involved as ongoing monitors.

Edwards said the funding, which was announced Wednesday, will enable what he called the "largest engineering citizen-science project in American history."

The three-year grant will support his team, along with researchers from North Carolina State and Louisiana State University.

Edwards, who teaches civil engineering, has been widely recognized for his work exposing a public water crisis in Flint, Michigan, caused by lead contamination. He intends to create a widely applicable model that will encourage people to test their own water.

"In the end, it seems good work does get recognized," Edwards said. "All the work we did with consumers over the years and the students at Virginia Tech created this bottom-up organic science phenomena. It created a tidal wave of understanding that couldn't be ignored.

"This is how science is supposed to work, to me."

His lab already receives water samples around the country for testing. With the additional money, Edwards hopes to identify more — and thus far neglected — communities with poor water quality that put people at risk.

Additionally, the funding will test home kits to determine which are the most effective in identifying water problems.

Edwards was in Washington, D.C., Wednesday readying for a meeting with EPA and LeeAnne Walters about the project.

Walters, who recently won the \$200,000 Goldman Environmental Prize for grassroots environmental activism, was the first person to reach out to Edwards about Flint's water issues.

She has since moved to Virginia, according to the Associated Press, but continues to be an active voice as aftershocks from the water crisis continue to resonate four years later.

Edwards faced opposition from state and federal agencies by arguing that Flint's water was inundated with lead particulate after local officials switched municipal water sources in 2014 to the economically depressed city as a strategy to save money.

Edwards and a team of Tech students, faculty and researchers worked with local residents to test the water and identify the source of lead contamination.

Michigan pediatrician Mona Hanna-Attisha conducted tests on children to show elevated blood lead levels around the city.

The work resulted in national attention on aging water infrastructure, a state of emergency, criminal charges against public officials and a switch back to an old water system.

Moving forward, Edwards said he and his research team will rely "on the Flint model."

Edwards joked that the grant would cause his operation "to lose money a little less quickly."

However, he said the funding would make a big difference.

Robby Korth

Robby Korth covers higher education at Virginia Tech and Radford University.