# Elevating the voices of concerned citizens

**A Q&A with Richard Rediske, Grand Valley State University**

## Describe your community engagement work.

In 2014, the Concerned Citizens for Responsible Remediation contacted me because they were concerned about residual environmental contamination from the demolition of a tannery in Rockford, Michigan. The tannery was working with city and state officials to redevelop the site for commercial and residential use. The CCRR, a grassroots citizen group, needed a scientist to put their concerns in a technical context and advocate for detailed environmental studies of the site. The CCRR was able to obtain thousands of Material Safety Data Sheets and chemical storage information from agency records, as well as the locations of disposal sites by interviewing waste haulers. I reviewed all the CCRR data and the information in the Michigan Department of Environmental Quality's files. This review showed extensive use of Scotchgard, which was banned in 2000 because it contained PFAS, or *per- and polyfluoroalkyl substances*, a group of chemicals linked to human health problems. I conducted patent searches and found Scotchgard use began in the 1960s. In 2017, I submitted a technical memorandum to the MDEQ outlining the CCRR's concerns about PFAS at the tannery and disposal sites near residential developments, and we also submitted similar information to the Environmental Protection Agency. Acting on this information and subsequent investigations, the EPA issued a finding that the site posed an imminent and substantial endangerment to public health and initiated legal action with the State of Michigan to compel site investigations and cleanup actions.

## What impact did your involvement have?

The impact of my work was to elevate the voices of concerned citizens by conveying their concerns in a scientific context to regulators and presenting them in media interviews and public meetings. The tannery was compelled to extend municipal water service to more than 1,000 residents who were drinking contaminated well water and to clean up hazardous wastes that were accessible to the public on a popular bike path bordering the tannery. We succeeded in our goal to eliminate exposure pathways and start the restoration process.

## What challenges did you face? How did you address them?

Our efforts were challenged by considerable pushback from the tannery, and they hired consultants and technical experts to refute our efforts. We did not have financial resources to conduct PFAS testing, so we had to focus on public records to support our position.

## What were the rewards in doing this work?

The work with PFAS and the CCRR was very rewarding because of the legal action taken against the tannery and the rapid pace of remediation. Based on current data, the plume of PFAS-contaminated groundwater covers 50 $km^2$ and intersects with 40 km of river frontage. Some of the blood levels in residents drinking contaminated well water exceed concentrations found in workers at 3M, the manufacturer of Scotchgard, so it was critical to remove this exposure pathway. The role of the CCRR in identification of PFAS problems at the tannery and their waste disposal sites was recognized in numerous media articles including the New York Times and CNBC. Our story also was featured in the May 17, 2019, issue of Science. The greatest rewards were seeing our advocacy work lead to supplying clean water to more than 1,000 affected residents and the tannery being held accountable for the costs of remediation.

## Any advice for fellow scientists?

Community engagement is a recognized form of scholarship (Boyer 1996; Driscoll and Sandmann 2001) and can be an important part of tenure and promotion considerations. It is easy for scientists to become comfortable discussing their work within professional groups, but a critical outcome of environmental research is to support efforts that lead to ecosystem sustainability, restoration, and preservation. Community engagement with stakeholders is a natural extension of academic scholarship and provides real opportunities for changing cultural values and practices, expanding collaborations, and personal growth. My PFAS work with the CCRR has led to providing testimony at Senate hearings, giving briefings to state and federal representatives, and helping additional communities advocate for clean water and the remediation of PFAS contamination. Successful community engagement requires collaboration with stakeholders and a long-term focus to yield results. These are the same foci we apply to our scientific careers as we develop expertise over time and build collaborative networks. Public Advisory Councils, watershed groups, and conservation organizations all need and welcome the participation of scientists to achieve their missions. I encourage all scientists to be involved with community engagement and further the protection of our natural resources.

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