

Research digs deep into the fracking controversy

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Industry's Neglect of the Locals in the Pennsylvania Marcellus Region," at the annual meeting of the Association of American Geographers. Kittner will be presenting April 14 at the meeting in Seattle.

Fracking involves using millions of gallons of water, sand and a chemical cocktail to break up organic-rich shale to release natural gas resources. Kittner's research examined the industry in Pennsylvania, known as the "sweet spot" for this resource, because of the abundance of natural gas. Pittsburgh has now outlawed fracking in its city limits as has Buffalo, N.Y., amid concerns that chemical leaks could contaminate groundwater, wells and other water resources.

The EPA is now doing additional study on the relationship of hydraulic fracturing and drinking water and groundwater after congress stated its concern about the potential adverse impact that the process may have on water quality and public health. Kittner attended an EPA hearing and also interviewed people in the [hydraulic fracturing](#) industry. She says billions of dollars from domestic as well as international sources have been invested in the industry.

The chemical cocktail used in the process is actually relatively small. The mixture is about 95-percent water, nearly five percent sand, and the rest chemical, yet, Kittner says some of those chemicals are known toxins and carcinogens, hence, the "not in my backyard" backlash from communities that can be prospects for drilling. The flow-back water from drilling is naturally a very salty brine, prone to [bacterial growth](#), and potentially contaminated with heavy metals, Kittner says. In addition, there's the question of how to properly dispose of millions of gallons of contaminated water, as well as concerns about trucking it on winding, rural back roads.

Based on her research, Kittner says that overall, the industry is "working to be environmentally responsible, and it becomes frustrated at

companies that do otherwise."

"I think that the study that the EPA is doing is going to be really helpful, and the [industry](#) – however reluctant to new regulations – is working with the EPA on this," Kittner says.

Provided by University of Cincinnati

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