

# Proximity to fracking sites affects public support of them, study finds

April 30 2018, by Michelle Klampe

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People who live closer to fracking sites are more familiar with and more supportive of hydraulic fracturing, while those who live in proximity to areas of higher oil and gas well density are more familiar with but not necessarily more supportive of the practice, a new study from Oregon State University has found.

The rapid rise of unconventional oil and natural gas development through the use of hydraulic fracturing, or fracking, and directional drilling has transformed the U.S. energy landscape, substantially increasing domestic energy production. Hydraulic fracturing involves the high-pressure injection of fluids to extract oil and gas from shale and other rock formations.

But the industry also is drawing criticism about the potential environmental, health and social impacts of fracking, creating a sharp divide between supporters and opponents of fracking.

The new study, led by Hilary Boudet, an assistant professor of climate change and energy at OSU, explores how proximity to unconventional oil and gas developments influences familiarity with and public support for fracking.

"The findings indicate that people who live closer to fracking sites may perceive economic benefits, but with a higher density of the wells, they may also notice the environmental risks and societal implications of fracking," said Boudet, who teaches in the School of Public Policy at

OSU's College of Liberal Arts. "The research also makes us think differently about what it means to be close to energy development. It appears to make a difference if it is one well or many wells."

The study was published recently in the journal *Risk Analysis*. Co-authors are Chad Zanocco, a doctoral student in the School of Public Policy at OSU; Peter Howe of Utah State University; and Christopher Clarke of George Mason University.

The researchers pulled data on wells that began producing between 2005 and 2015 from DrillingInfo, a data and analytics service that provides real-time geo-coded oil and gas well production and completion information. They also used public opinion survey results from nearly 20,000 people who participated in the University of Texas at Austin Energy Poll between 2012 and 2016.

Using geo-spatial mapping, the researchers combined the survey results, which included participants' zip codes, with the map of oil and gas well locations to determine residents' proximity to [fracking](#) sites. They used two methods to capture proximity: geographic distance to the most proximate well "as the crow flies" and a measure of the density of wells within a 100-kilometer radius.

They found that those living closer in distance to an unconventional well were more familiar with and more supportive of hydraulic fracturing. They also found that those living in areas with higher well density were more familiar with hydraulic fracturing but not necessarily more supportive than those living in areas with lower well density.

The findings raise questions about the "chicken-egg" debate about whether development or support comes to a community first, Boudet said.

"Are wells being developed in places where they are more likely to have support? Or is support coming post-development?" she asked.

"My hunch, given case studies in specific locations, is that wells are more likely to be proposed and approved in locations predisposed to accept and even encourage [energy](#) development," Boudet said. "But these kinds of questions require additional research."

She and her colleagues hope to tackle those issues in future studies.

**More information:** Hilary S. Boudet et al, The Effect of Geographic Proximity to Unconventional Oil and Gas Development on Public Support for Hydraulic Fracturing, *Risk Analysis* (2018). [DOI: 10.1111/risa.12989](#)

Provided by Oregon State University

Citation: Proximity to fracking sites affects public support of them, study finds (2018, April 30) retrieved 25 April 2024 from <https://phys.org/news/2018-04-proximity-fracking-sites-affects.html>

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