

Engaging the Community to Inform the Hydraulic Fracturing Debate



Laura Lautz
Associate Professor, Earth Sciences

CURRENT RESEARCH

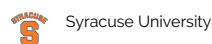
Developing best practices for distinguishing sources of well water contamination in shale gas basins

Hydraulic fracturing has unleashed a boom in domestic shale gas production, with the US now projected to be a top exporter of natural gas within the coming decade. Despite the economic benefits, environmental concerns have made the debate over hydraulic fracturing in the Marcellus particularly contentious, often characterized by entrenched and polarized positions, along with misinformation, which has allowed little room for scientific research to inform decision-making. Dr. Laura Lautz, Associate Professor of Earth Sciences at Syracuse University, hopes to bring balanced, scientific information to the debate and to provide the community with a resource to better understand the potential impacts on water quality in the region. The Marcellus presents a unique opportunity to characterize water quality in two contrasting settings -- an area of intense shale gas production in Pennsylvania and an area with a permanent ban on hydraulic fracturing in New York.

With the belief that there simply "isn't enough science" to definitively assess water quality impacts of hydraulic fracturing, Dr. Lautz engages the community by providing them unparalleled water testing services and is developing a publically-available database of regional water quality. Dr. Lautz is committed to overcoming limitations of prior studies by establishing a baseline of water quality in the region prior to hydraulic fracturing, using an unbiased sampling design in space and time, and making all water quality data freely available to the public. Her work is developing robust geochemical fingerprinting tools that can reliably distinguish water quality impairment associated with hydraulic fracturing from the other sources of water contamination in the...

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AFFILIATION



EDUCATION

- Ph.D., in Earth Sciences, 2005 , Syracuse University
- M.Ed., in Teaching & Curriculum, 1999 , Harvard University
- B.S., in Geoscience, 1998 , Lafayette College

AWARDS

- 2008 National Science Foundation Faculty Early Career Development (CAREER) Grant Recipient
- 2015 National Science Foundation Research Traineeship Award Recipient

RESEARCH AREAS

Environment, Chemical, Clean Energy, Geology

FUNDING REQUEST

Your contributions will support the continued research of Dr. Laura Lautz, at Syracuse University, as she guides the best practices for water quality monitoring in shale gas basins. Donations will fund the necessary \$100K/year required to support data collection efforts, which includes soliciting voluntary landowner participation, visiting homes to sample well water, running analyses on samples in multiple geochemical laboratories, synthesizing data into an online database, and returning water quality results to homeowners. In choosing to donate, you will help support unbiased research that informs the hydraulic fracturing debate.