



## Understanding the Effect of Hydraulic Fracturing on Groundwater Quality Groundwater Sampling Project Fact Sheet

**What is the purpose of the study?** We want to know if groundwater quality is affected by hydraulic fracturing or fracking, in eastern Ohio. Previous studies in Pennsylvania have indicated that fracking can contribute to high concentrations of methane, the primary component of natural gas, in groundwater wells.

**Who is conducting this study?** Researchers from the University of Cincinnati Department of Geology are conducting the study.

**Who is sponsoring the study?** The Deer Creek Foundation and the Alice Weston Foundation, both non-profit philanthropic agencies, have provided funding for this study. Private donations from individuals also contribute to our funding. This project is not funded in any way by the oil and gas industry. There is no cost to the landowner.

**How can you help in this study?** If your home has a groundwater well, we want your permission to come to your household to take a water sample from your well. Ideally, samples of unfiltered groundwater are taken from an outdoor spigot; however, we may also take samples from faucets and other indoor spigots. All work will be handled by trained personnel who will respect any of your access requirements.

**How does the sampling work?** At a predetermined time, a member or members of our research team will come to your home to take a water sample at your faucet or spigot location. Water is collected then taken back to the laboratory at the University of Cincinnati for testing. Our sampling process takes less than 15 minutes and can be scheduled whenever is most convenient for you!

**What will be tested?** The water samples will be tested for many chemicals, but our research is focused on methane. Methane is the main component of natural gas but can also be found naturally in groundwater. The objective of our study is to determine the amount of methane in the water samples. We also use isotopic measurements to determine whether this methane originates from fracking or natural processes in soil. Additionally, we measure the pH (or acidity) and electrical conductivity (or salt content) of groundwater. These can be important indicators of the presence of fracking water.



UC team members in the process of water sampling.

**Will I receive the results of the sampling on my property?** Yes. We will provide you the water quality sampling results for the samples taken at your household. The water sampling results from this study may be published, but your name and address will not be included in the publication. Your results will remain anonymous.

**How can I learn more or ask to participate?** If you would like to learn more about the study or are interested in having a water sample taken at your home, please call Dr. Amy Townsend-Small with the University of Cincinnati by phone at (949) 614-6250 or email at [amy.townsend-small@uc.edu](mailto:amy.townsend-small@uc.edu). You can also contact Claire Botner, the UC graduate student in charge of the project, via phone at (606) 521-1112 or by email at [botnerec@mail.uc.edu](mailto:botnerec@mail.uc.edu).