

FREE WATER QUALITY TESTING



Carnegie Mellon
CREATE Lab

Participants needed for a groundwater monitoring project.

for more information contact:

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The Washington County Watershed Alliance (WCWA) and Southwest PA Environmental Health Project (SWPA-EHP), with assistance from Carnegie Mellon University's (CMU) CREATE lab, are conducting a large-scale water monitoring project in Washington County, PA. Our goal is to develop a device that will allow homeowners to routinely monitor their well or spring water quality. We will also continue to monitor stream water quality through the WCWA datalogger program, to track and identify possible pollutants traveling through both groundwater and surface water.

What will YOU get out of it?

- Knowledge of your water quality issues and monitoring techniques
- Awareness of changes in your water quality, with assistance to identify and resolve the issues
- Information on the impacts of drilling activities on water sources
- Small rewards for continued participation

What are the responsibilities of participating households?

- Must have private well or spring water
- Must not use any whole-house water treatments (softeners, filters, chlorinators, etc.)
- Answer a pre-project survey
- Attend an initial training session
- Monitor device for up to 12 months
- Cooperate with data collection from device
- Answer post-project survey

Why this project?

Since 2006, 3,056 wells have been permitted and 1,436 drilled within Washington County¹. While natural gas extraction does not necessarily contaminate our water sources, drilling-related activities such as poorly managed sites, leaky wastewater pits, and spills can have an impact on surface water and groundwater². Studies on well water testing and contamination indicate that private wells in PA and elsewhere have been impacted by natural gas extraction activities². To date, our stream monitoring in the county has shown no adverse signs of contamination, but many homeowners have identified potential well water contamination. By monitoring the water sources, citizens can be alerted in the event of significant changes in their water quality.

How will we achieve our goals?

Cattfish

We will undertake this project with the technical assistance of CMU and their in-home groundwater-monitoring device, the CattFish. The CattFish provides an easy way to capture refreshed water readings of well or spring water systems by installing it in the toilet tank of the household. The device records the temperature and conductivity of the water, which are used as indicators of potential changes in water quality. The data will be uploaded to a memory device and sent to CMU for interpretation. The devices will be distributed to up to 100 participating households in Washington County. Homeowners will be able to access online data via a private, secure access site. With permission, this data will also be entered anonymously into a Washington County groundwater database for public access.

Dataloggers

The WCWA dataloggers will monitor surface water for this project. Stream monitoring devices will be placed by WCWA into streams within close proximity to the well/spring water testing sites. These devices will also monitor conductivity and temperature and can be directly compared to the Cattfish data. All data will be collected and analyzed by the WCWA, with assistance from the SWPA-EHP.

¹ PA DEP, 13 June 2013. http://www.portal.state.pa.us/portal/server.pt/community/oil_and_gas_reports/20297

² Brown, David, Lewis, Celia, and Weinberger, Beth, 2012. Well Water Contamination: SWPA-EHP Ranking System and Monitoring Strategy.