Addressing Well Water Contamination in North Carolina’s Impacted Communities: A Case Study in Community Engagement

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3204 Murray Hall & Broadcasted to IMS 222

To schedule a meeting with Dr. George, please contact Lisa at lisafou@live.unc.edu
The UNC Superfund Research Program (SRP) and community partners recently launched the Well Empowered project to help develop a better understanding of the issues related to toxic metals in private wells in North Carolina. Through this engaged scholarship, researchers hope to document exposure to toxic metals and assist with responses that reduce harmful exposures in impacted communities.

With the third largest population of well water consumers in the U.S. (Water Systems Council 2014), approximately 3.2 million people in NC get drinking water from private wells (USGS, 2014). Although the NC General Assembly now requires tests for all new wells, less than seven percent of old wells were tested before 2010. Among those tested, research shows many private wells have concentrations of arsenic, cadmium, chromium, manganese, lead, and other contaminants exceeding Safe Drinking Water Act standards (Sanders et al., 2011).

Following the 2014 coal ash spill in the Dan River, the NC General Assembly passed the Coal Ash Management Act, requiring private well tests within 1,500 feet of one of the states 32 coal ash pits. When over 330 residents from several of these communities received “do not drink” orders from state agencies, directing them not to consume their well water, many community leaders turned to the UNC SRP to help understand test results and the associated health implications.

In the first phase of this project, we developed a survey in partnership with two environmental nonprofits, a statewide coalition of impacted communities, and local residents to better understand ways private well owners use their well water and how local issues influence water consumption. Community partners are helping SRP staff survey well owners in Stokes Co. and nearby communities by visiting local churches, community meeting, and area neighborhoods. The second phase will bring in scientists from UNC’s SRP, Dr. Rebecca Fry, who will begin sampling residents’ soil, well water, and urine to better understand potential environmental exposures by documenting current levels of contaminants in and surrounding community homes.