3 Simple Steps to Protect a Well or Spring from Marcellus Shale Fracking

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Step 1: Test you water daily with a conductivity pen.

-Conductivity is a measure of the ability of water to conduct an electrical current and changes in conductivity reflect changing water quality conditions.

-Check the conductivity of your household water supply once daily at relatively the same time (i.e. before making your morning coffee/tea/).

-Record the results in a notebook and watch for dramatic changes. Small change is expected on a daily and seasonal basis.

Conductivity pens can be used to monitor your well water. The cost anywhere from $80-150. Here are some links to some vendors of conductivity pens that we googled:
http://www.fondriest.com/products/extech_ec400.htm
http://www.forestry-suppliers.com/product_pages/View_Catalog_Page.asp?mi=3870
http://www.grainger.com/Grainger/EXTECH-TDSConductivitySalinity-Pen-1ZKY6

Measuring conductivity is the best way to detect spills and any potential contamination from produced water from the Marcellus Shale Formation. Typical conductivity recordings in regional streams range from 100-300µS/cm (microSiemens per centimeter). Your well water should be less than 500µS/cm. In a Greene County well, fracwater showed conductivity ranging from 81,000-84,000µS/cm in 3 different samples. Should your well become contaminated by brine water the change in conductivity should be dramatic.

Step 2: Establish background water quality conditions of your well water.

-Conductivity measures how much material is dissolved in the water; however, it does not identify what the 'material' specifically is.

-To determine the "material", you can order kits from an EPA certified lab. Fill the kit with your well water and send the samples back to the lab. The lab will send a detailed evaluation of your existing well water conditions.

-Keep your data in a safe place.

You can get water test kits from any water testing laboratory. For instance, I typically order kits, fill them up, and send them back to the National Center for Water Quality Research at Heidelberg University, http://www.heidelberg.edu/WQL . I recommend an ICP/MS metals scan ($80), nutrients ($20) and VOC's ($50-60). Do these tests repeatedly, once a month for 5 or 6 months to establish the background, or pre-drilling conditions of your well. Also test periodically during the nearby drilling of Marcellus Shale. Keep these results for your records.

Step 3: Write it down, be vigilant and create a record for your well.

-Record the characteristics of your water in your conductivity notebook. Include the color (i.e. clear, milky, brown), taste (i.e. no taste, bitter, salty), and odor (i.e. no odor, sulfur smell) of your water.

-Some chemicals that are toxic do not have any odor, taste or smell. There may be a period of time from when your well goes bad to when you notice any change, and consuming the water during that period could harm your health. This is why measuring the conductivity daily is important. If you notice a significant change in the conductivity of your water then stop consuming it immediately and send a sample to an EPA certified lab as in number 2.