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Well Water Contamination - When Was Your Well Last Tested? **Well Owner Information #4**

Acreage, nature and open spaces drew us to our rural lifestyle. Quality of life, property value and other benefits we enjoy, however, depend on the availability and quality of groundwater from our Denver Basin wells. Ensuring that our wells can provide safe drinking water is essential to our health and lifestyle. This newsletter provides an overview on the complex topic of well water contamination. The included hotlinks offer helpful, expert information resources to more effectively manage and monitor your groundwater well, and understand potential sources of contamination.

The source and quality of water flowing into public water systems are checked regularly by water experts. However, the quality of water used by private well owners is *not* regulated. Therefore, water in many private wells has never been tested to confirm its quality or suitability for drinking. As a private well owner, it's your responsibility to protect your well and to know whether it is working properly and your family's drinking water is safe! Groundwater quality across Colorado varies significantly due to climatological conditions, topography, geology, and human-caused contamination. As of January 1, 2011, in Douglas County alone, there were an estimated 8,057 domestic wells providing water to an estimated 8,500 housing units, according to the Douglas County Information Resource Group.

The EPA states that most groundwater in the U.S. is safe for human use. In Colorado, however, groundwater contamination has been found in many locations, and older wells in shallow aguifers are more likely to be contaminated as a result of human activity. Naturally occurring contaminants include trace elements often found in underground rocks and soils. These trace elements may include iron, manganese, arsenic, selenium, radium, radon, and high concentrations of calcium, magnesium and sulfate, among others.

Radon is a naturally occurring radioactive gas formed by the breakdown of uranium in the soil or bedrock. It can seep into well water from surrounding rocks, and is released through the soil into the atmosphere and into buildings through unsealed foundations or as it leaves the faucet or shower, if the water is contaminated. High radon levels are locally found in all 50 states and in all parts of Colorado. You can find helpful links about radon, its presence in Colorado, and radon testing and mitigation here.

Common groundwater pollutants from human-caused activity include:

- Improper use of fertilizers, animal manures, herbicides, insecticides and pesticides
- Improperly built or poorly located and/or maintained septic systems for household wastewater
- Leaking or abandoned underground wells, storage tanks and piping

- Animal holding pens/corrals with concentrated waste that rainwater and snowmelt can carry into groundwater
- Improper disposal or storage of wastes
- Industrial activities such as chemical or metals processing, paper making, mining, oil and gas exploration and production.

The Colorado Dept. of Public Health and Environment's excellent publication on "Drinking Water from Household Wells" discusses natural and man-made contaminants in layman's terms. It also provides helpful tables like the *Quick Reference List of Noticeable Problems* and *Protecting Your Water Supply*. This department's new portal on private well water answers eight common questions on water quality, risks, testing and treatment. Protect your rural lifestyle by testing your well water regularly and maintaining it to safeguard your drinking water. Why? health: Because we can't see, smell or taste most contaminants. Understand your groundwater well by downloading, How Well Do You Know Your Water Well?" It's worth your time!!