



## Public Health Administration

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**Subject:** Health Department Advises Private Well Owners to Test Their Water

San Bernardino County is vast, encompassing over 20,000 square miles. The more populous areas of the county typically have water providers that ensure drinking water is safe and meets all state and federal requirements. In many rural areas of our county, properties may be served by private well water. Thousands of households are on well water in San Bernardino County.

When a well is first constructed, or brought back into service after being inactive, permitting and inspection process occurs by the Division of Environmental Health Services (EHS). For a new well, an initial sample of water is tested for bacteria, nitrate and other known contaminants, such as arsenic. When an inactive well is brought back into service, additional sampling is required (bacteria, inorganics, general mineral and physical). A report is then provided to the owner and recommendation with a list of best available technologies to treat the water (if contaminants are found). After this is completed, the well water is not regulated or tested for safety by any governmental agency. The testing and safety of well water is the responsibility of the property owner or residents.

An article by Hynds, et al titled *Contamination of Groundwater Systems in the US and Canada by Enteric Pathogens, 1990-2013: A Review and Pooled-Analysis*, states well water can be contaminated by human and animal waste. Sources of contamination are septic tanks, sewage systems, leach fields, seepage pits, animals and agricultural activities. It is imperative to maintain the wellhead watertight and the concrete base in good condition to prevent groundwater contamination. Improperly maintained wells can allow contaminated water on the surface or from subsurface leach fields to flow down the well casing, thereby contaminating groundwater. Drinking nitrate contaminated water can cause blue baby syndrome or even death. Drinking contaminated water has been attributed to 6.5 million illnesses in the US each year. (Hynds et al) It is recommended that at minimum, the well owner sample well water for total coliform bacteria quarterly and nitrate annually.

A recent article by Environmental Science and Technology, *Estimating the High-Arsenic Domestic-Well Population in the Conterminous United States*, indicates that there are approximately 44.1 million people or 14% of the US population using well water. Of this number, approximately 2.1 million people are drinking arsenic contaminated water. For San Bernardino County, the estimates are up to 40,000 wells of which, up to 5,000 are contaminated by arsenic. It is recommended that the well be sampled at least once for arsenic if it hasn't been sampled in the past.

Preventing ground water contamination and proper well maintenance is the best way to keep your well water clean and free of contaminants. Annual sampling of private wells helps to ensure the water used for drinking is safe. To assist well owners in understanding how wells work, what testing is

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recommended, the cost of testing and what is required to keep a well safe, EHS has placed a [Guide for Private Domestic Well Owners](#) on its website at <http://wp.sbcounty.gov/dph/programs/ehs>. In addition, EHS can be contacted for specific questions and resources at 1-800-442-2283.



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