



## Testing your well's water quality

More and more families are going “GREEN,” opting for a self-sufficient means of obtaining their domestic water and power sources, and in many cases relying less on public utilities for their basic water and power needs. Some households have installed solar panels to help defray energy costs and reduce their reliance on the energy grid. Others have made a choice to purchase a home with a private domestic well, utilizing the groundwater in the aquifers beneath their property.

Owning a private domestic well has its benefits and its drawbacks. While state law allows domestic well users up to 2 acre-feet per year (1,785 gallons per day) without those monthly water bills, well owners still pay for the initial capital investment of drilling the well, installing a filtering system and pump, and the on-going costs to run the filter and pump.

And what are you really getting from your well? Is it clean, pure water? Or could it be under the influence of a neighboring septic tank, agricultural or industrial run-off, or possibly affected by naturally occurring chemicals that could be harmful to your health?

According to The University of Nevada Cooperative Extension (UNCE), untreated or “raw” groundwater is not always safe to drink straight out of a domestic well. While much of our groundwater is quite good, there is a chance it may be contaminated by natural or human causes. Some of our local deep aquifers contain water that has naturally high concentrations of salts and other dissolved solids, including arsenic and uranium. Consuming water with high levels of arsenic has been connected with various types of cancer and other health effects. And, you can't tell if the water is contaminated simply by its appearance.

Local water purveyors must adhere to very strict rules under the EPA's Safe Drinking Water Act that regulate the quality of the water they provide. This includes the aesthetics of the water – smell, appearance and taste, as well as the health and safety of the product. However, private domestic water wells are not subject to these same rules. As such, your well water may not have been tested for harmful chemicals or received treatment to remove any harmful constituents that might be present.

According to Sue Donaldson, Water Quality Education Specialist at UNCE, well owners should test well water at least once a year for bacteria including tests for coliform, E. coli and fecal streptococcus. At least every five years well owners should test their well's water chemistry and run a “routine domestic water analysis” that includes testing for arsenic, nitrite and nitrate.

A partial list of labs certified to perform these tests is outlined below:

*(Department of Water Resources does not endorse, certify, nor recommend any specific laboratory)*

- **Nevada State Health Laboratory - Stephanie Van Hooser 775-682-6205**
- **Sierra Environmental Monitoring, Inc - Joe Nava 775-857-2400**
- **Western Environmental Testing - Nick Ross 775-355-0202**

A complete list of certified labs serving Washoe County and adjacent areas can be found by logging on to the Nevada Division of Environmental Protection's Web site at <http://ndep.nv.gov/bsdw/wells.htm>.

Should laboratory testing identify any problems with the quality of your well water, many treatment options are available to protect you and your family. For example, ultraviolet light and chlorination can be used to kill bacteria. Reverse osmosis filters can remove harmful metals. Activated carbon and other filters can address other types of harmful chemicals. Web sites like [www.nsf.org](http://www.nsf.org) (National Sanitary Foundation) and [www.epa.gov/safewater](http://www.epa.gov/safewater) (Environmental Protection Agency) can answer many of the questions you may have about well water safety and treatment options.

For more information on protecting the quality of your private domestic well water, please log on to University of Nevada's Cooperative Extension Web site at [www.unce.unr.edu](http://www.unce.unr.edu) or feel free to call the Department of Water Resources at 775-954-4600.

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