



Public Health Department

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WHAT YOU NEED TO KNOW ABOUT WATER QUALITY IN YOUR WELL

DO YOU GET YOUR WATER FROM A WELL? PLEASE READ ON!

Private well owners are responsible to make sure that their own water is safe. Butte County joins you in concern for your family's well-being, and is pleased to help answer these important questions:

- ❖ What is a well?
- ❖ Do you know your surroundings?
- ❖ How do wells become contaminated?
- ❖ How do I know if my water is safe?
- ❖ What should I test my water for?
- ❖ How can I protect my water?
- ❖ Who can help me?

WHAT IS A WELL?

Simply stated, a well is a hole drilled into the earth to obtain water. Slotted plastic or metal well casing is placed in the hole and a pump is installed to pump the water out. Properly constructed wells have a sanitary seal installed around the upper portion of the well casing to reduce the chance of surface water and pollutants on the surface from entering the well. Improperly constructed wells including hand-dug wells and some older wells without sanitary seals may allow contaminants to enter the well. Wells must be drilled and constructed properly under permit from the Butte County Environmental Health Division. Further information is available from Environmental Health at 530-538-7281.

HOW DO WELLS BECOME CONTAMINATED?

Some groundwater contains dissolved naturally occurring elements such as arsenic, boron, selenium, or radon (a gas formed by the natural breakdown of radioactive uranium in the soil). Whether these natural contaminants can cause health problems depends on the amount of the substance present, how long you have been exposed to the substance and on your overall health. In addition to natural substances, groundwater can be polluted by human activities generating contaminants such as:

- ❖ Microorganisms (agricultural operations, sewage treatment ponds, septic systems)
- ❖ Fuels- gasoline & diesel (gas stations, auto body shops, maintenance yards, industrial facilities)
- ❖ Solvents – Volatile Organic Compounds such as trichlorethylene and perchlorethylene (dry cleaners, industrial facilities, auto repair shops, chemical storage facilities)
- ❖ Nitrates (agricultural operations, septic systems)



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- ❖ Pesticides (agricultural operations, suburban yards)
- ❖ Metals – lead, arsenic & copper (mining, old agricultural operations, industrial operations, leaded fuel, household plumbing)

DO YOU KNOW YOUR SURROUNDINGS?

If you are using a private well for your drinking water supply it is advised that you become aware of the types of activities that are occurring near your well that could potentially impact your water quality and quantity.

HOW DO I KNOW IF MY WATER IS SAFE?

Naturally occurring chemicals in the soil can give well water a distinctive taste and odor. On the other hand, although your water may taste and smell fine, the only way to know for sure that your water is safe is by testing it. Harmful bacteria or chemicals that you cannot see, smell or taste could be present. Water testing is important because it:

- ❖ Helps you identify if contaminants are present
- ❖ Tells you how much contaminant is present
- ❖ Establishes a comparison with past or future results

Having your water tested regularly will help you become aware of a potential problem early so that you take steps to address it.

WHAT SHOULD I TEST MY WATER FOR?

There are a variety of drinking water tests available. Wells are most often tested for bacteria only. This is a readily available and relatively inexpensive test. However testing only for bacteria does not provide conclusive information about other possible contaminants. Based on your knowledge of activities in your neighborhood, you can work with the analytical laboratory to select the appropriate tests. Below are examples of common contaminants and appropriate tests:

- ❖ Gasoline and Diesel/Motor Oil - EPA Method 8015
- ❖ Volatile Organic Compounds - EPA Method 8260
- ❖ Pesticides - EPA Method 8080
- ❖ Herbicides - EPA Method 8150
- ❖ Metals and Inorganics (I.e. arsenic, lead, nitrates, chromium, fluoride) - EPA Method 200 Series
- ❖ Bacteria (Total Coliform and Fecal Coliform) EPA Colilert Method

Some contaminants that have been found in Butte County include: trichloroethylene (TCE), tetrachloroethylene (PCE), arsenic, nitrates, methyl tertbutyl ether (MTBE), fecal coliforms, and a variety



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of volatile organic compounds. For a list of qualified laboratories, please refer to the Yellow Pages under the listing of "Laboratory Testing".

HOW OFTEN SHOULD I HAVE MY WATER TESTED?

We recommend you test your well for total and fecal coliform bacteria prior to use. The following is offered as a guideline for testing existing wells:

- ❖ Bacteriological tests should be run at least twice a year, if you have an unsealed well. On a sealed well, once every two years is recommended.
- ❖ Volatile Organic Compounds and Pesticides should be run at least every 3 to 5 years if the well is located in an area where those constituents are a known concern due to surrounding land use practices or naturally occurring compounds.
- ❖ Nitrates and Metals should be run at least once every five years if your well is located in an area of concern about high nitrate levels.

You may contact Butte County Environmental Health if you are concerned that your well may be located in one of the areas of concern described above. If any of the above are detected, you should immediately consult with the Butte County Environmental Health, one of the agencies listed below, or with a C-57 licensed well.

The results of your well tests are usually considered private information. Check with your laboratory regarding confidentiality.

DO MY RESULTS PRESENT A HEALTH RISK? CAN I PROTECT MY WATER?

The Environmental Protection Agency (EPA) and State of California set the Maximum Contaminant Level (MCL) for many substances in public drinking water. There are no regulations for private water supplies. Call Butte County Environmental Health at 530-538-7281 for more information or visit the CA-DHS Drinking Water Office website at:

<http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Chemicalcontaminants.aspx>

HOW CAN I PROTECT MY WATER?

Here is a list of things you can do to protect your well water:

- ❖ Periodically inspect exposed parts of the well for damaged casing, broken or missing well cap, or cracked seals.
- ❖ Slope the area around your well to drain surface runoff away from the well.
- ❖ Avoid mixing or storing pesticides, fertilizers, fuels or other chemicals near the well.
- ❖ Pump and inspect your sewage disposal system regularly.
- ❖ Never dispose of toxic chemicals down household drains.
- ❖ Hire a C-57 licensed well driller for any new well construction, modification, abandonment, closure, or inspection.



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If you hire a C-57 licensed well driller to inspect your well, items that can be addressed in the report include:

- ❖ Information about the brand, size, date codes of all visible equipment.
- ❖ Inspection of the equipment and assertion that each component is either in working order or that the defects are listed.
- ❖ Water quantity measured in gallons per minute using a method that measures GPM until the drawdown is stabilized.
- ❖ Report from a certified laboratory, at a minimum testing for fecal and total coliform bacteria.
- ❖ Estimate for any repairs that are necessary to bring the well up to optimal functionality.

Most types of water contamination can be treated. Water softeners or filters do not guarantee water safety. Different contaminants may require specific treatment systems. If you have contaminated water, contact the agencies listed below for advice.

WHO REGULATES MY WELL?

Water quality from privately owned and used wells is not regulated. Butte County has adopted a well ordinance that regulates the construction and development of wells, but it is your responsibility as a property owner to maintain your well, to monitor your water quality, and to help protect the quality of drinking water in Butte County. The Butte County well ordinance can be found on the Environmental Health website (www.buttecounty.net/publichealth).

WHO CAN HELP ME?

**Butte County Public Health Department
Division of Environmental Health
202 Mira Loma Drive Oroville, CA 95965
530-538-7281**

**State of California
Regional Water Quality Control Board
Central Valley Region 415 Knollcrest, Suite 100
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