

A safe water supply is important for you and your family's health. Protecting your well water supply from contamination is YOUR responsibility.

WHAT IS GROUND WATER?

Ground water is a vast and vital resource underlying the earth's surface. Fifty percent of the people in the United States and two-thirds of Washington State residents use ground water for drinking water. At one time, ground water was believed to be naturally protected from contamination. However, we now know that some contaminants can enter ground water because every state in the nation has reported cases of ground water contamination.

WHERE DOES THE CONTAMINATION COME FROM?

Ground water contamination can come from natural or human sources. Naturally occurring contaminants include bacteria and viruses, nitrates, heavy metals (like arsenic, cadmium, chromium and lead), radon, and fluoride (in excessive amounts).

Human activities, past and present, are the biggest threat to ground water quality. Bacteria and nitrates are abundant in human and animal waste material. If either septic tank systems or livestock management areas are located too close to a well, contamination may result. In agricultural areas, fertilizers and pesticides are frequently applied to crops. This can

also occur in suburban areas where there are many lawns, gardens, and golf courses. These chemicals can reach ground water. Fertilizers contain nitrogen compounds which may break down into nitrates. Consumption of excessive amounts of nitrates can cause adverse health effects in infants less than 6 months of age and pregnant women. Other potential contaminants include: underground storage tanks used for home heating fuels, used motor oil, paints, industrial products and other wastes that are not properly managed.

Understanding and identifying the potential sources of contamination around your well is important for the safety of your drinking water.

TO PROTECT YOUR WATER SUPPLY:

- Decommission any well that is abandoned, unusable, or not intended for future use.
- Do not store pesticides, fuels, fertilizers or other chemicals within 100 feet of your well.
- Follow package directions carefully when using pesticides, herbicides and fertilizers.
- Properly dispose of hazardous substances.
- Do not flush them down the toilet or pour into sink drains, storm drains or onto the ground.
- Test your well water annually for bacteria.
- It is recommended that you test your well water for nitrates at least every three years.
- Disinfect your well after work is performed or repairs are made. For instructions, contact a well driller or the Benton-Franklin Health District.

- Install a sanitary seal to the top of your well casing. If one is already installed, check to be sure it is in place and tightly secured (although not all wells have sanitary seals and/or caps—some may have pumping equipment attached at the surface—all wells need to be sealed from surface pollutants).
- Periodically check the condition of your well to be sure everything is in proper working order.

YOUR PUMPHOUSE

A pumphouse should:

- NOT be used to store any chemicals, fuels, paints or fertilizers.
- NOT be used as a storage shed and/or workshop.
- Be properly ventilated, insulated and drained, including a properly reinforced concrete floor and structurally sound walls.
- Provide adequate area for ease in installation and maintenance of water system components.
- Have adequate lighting and heat.
- Be insect and rodent proof.

TYPES OF WELLS

Older wells were most likely located according to traditional practice and/or regulations at the time of construction. While many of these wells may not meet current construction standards, they may still be producing drinkable water. If you have an older well, you may want to consider how your well conforms to current minimum standards and recommendations.

WELLS THAT DO NOT MEET CURRENT CONSTRUCTION STANDARDS:

Wells that are improperly located, designed, constructed, and/or maintained may be a threat to ground water. In addition, if an abandoned well is improperly capped or sealed, it may provide an avenue for ground water contamination as well as be a significant safety hazard.

Dug wells are shallow, large diameter holes that can provide a direct route for pollutants to enter your drinking water. Dug wells are typically: three to six feet wide; 15 to 50 feet deep; often constructed by hand; and lined with rock, brick or concrete.

Sand-point wells are constructed by driving assembled lengths of pipe into the ground. These wells are normally small in diameter (two inches or less) and less than 50 feet deep. They are installed in areas of relatively loose soils such as sand and gravel. Sand-point wells are a threat to ground water because they are not sealed around the driven pipe. A sealant around the pipe is important in order to protect the well from surface contamination. If a well does not have a surface seal, contaminants can flow along side the well casing and contaminate ground water.

If you own an older well that does not meet current construction standards, you may want to have it inspected by a licensed well driller. Older pumps may leak lubricating oils, which can contaminate ground water. In addition, an older well is likely to have a casing with some corrosion.

DRILLED WELLS:

Drilled wells often meet current construction standards. They are commonly 6 to 12 inches in diameter and can penetrate not only through earth, but also through rock. Therefore, drilled wells can extend deeper than sand-point or dug wells, reaching ground water less likely to be contaminated. In addition, the casing around a drilled well is sealed in order to protect ground water from surface contamination

The Washington Department of Ecology administers the laws regulating construction, maintenance and abandonment of wells. Chapter 173-160-415 of the Washington Administrative Code specifically addresses the abandonment of all types of wells. Well drillers and landowners are required to follow these procedures. A local licensed well driller is the best person to decommission an abandoned well because he/she will have experience and knowledge of well construction/decommissioning materials and methods as well as a working knowledge of the geology of the area.

For more information or advice:

Benton-Franklin Health District
Environmental Health Division
7102 W. Okanogan Place
Kennewick, WA 99336
509-460-4205
Website: <http://www.bfhd.wa.gov>

You may obtain a copy of your well log on the internet at: <http://apps.ecy.wa.gov/welllog/>

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Well Protection

The Single Family Well



www.bfhd.wa.gov

