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Have a question?
Visit the Private Well Owner Hotline at 855-420-9355 (855-H20-Well)

Protecting your groundwater quality

Most U.S. groundwater is safe for human use. However, contamination can and does happen. There is much that informed well owners can do to minimize the potential for contamination to enter their water supply. Here are five strategies for doing so:

#1--Maintain your well. Regular well maintenance includes, but is not limited to:

- A well cap, which seals off the top of the well from surface contamination
- Well casing, which can keep a borehole from collapsing and can house pipes, electrical wires and a pump
- A pump either submersed in the water or housed on the surface outside the well
- A "pitless adapter" which provides a sanitary connection in cases where the water distribution pipe hooks up to the well underground
- Well screens, which are used mostly in sand and gravel aquifers to filter out excess sediment, sand or other particulate

Drilling technologies: Depending on the drilling environment, different...
• Checking the visible parts of your well system monthly for signs of wear and tear or damage
• Getting a periodic water well system inspection by a qualified water well professional
• Locating any abandoned wells on your land; have a water well system professional properly decommission it

#2--Test your water annually for bacteria, nitrate, and anything of local concern.
• Water testing is a diagnostic tool that can detect new contamination, possibly leading to groundwater protection remedies

#3--Proper water well system construction.
• When building or modifying a well system, use a qualified water well system professional who can build your system to any applicable codes and best practices.

#4--Use good well owner property use practices.
• Keep animals away from the wellhead
• Don’t mix or use pesticides, fertilizers, degreasers, fuels, and other pollutants near the well
• Never dispose of wastes in dry or abandoned wells
• Have a qualified septic system service provider pump and inspect your septic system
• Avoid disposing of hazardous substances in your septic system
• Be careful around the yard to avoid damaging the wellhead

#5--Protecting groundwater after a natural disaster.
• After a natural disaster such as a flood, tornado, earthquake or hurricane that impacts your well, use a qualified water well system professional to assess your system and perform repairs and maintenance
• Post-disaster well cleaning may include removal of debris from the well, cleaning individual system components, and disinfection

Learn more by visiting www.WellOwner.org, and take a free online lesson and/or view a recorded webinar on groundwater protection.

Proper well construction vital to water quality

A modern water well is an expertly engineered and constructed method of delivering groundwater for drinking, irrigation, and other purposes. Knowing some well construction basics is important to asking informed questions when you are seeking to have a new well system installed.

Well system components: Components may include:

- Air rotary--A method of rotary drilling that uses compressed air as the circulating medium
- Air hammer--A type of air rotary drilling that uses a pneumatic hammer to provide energy to the drilling bit
- Cable tool--A drilling method based on a percussion principle
- Mud rotary--A method that uses drilling fluid as a circulating fluid to remove cuttings and stabilize the borehole

Other construction considerations:

- Location--Is the well head located 1) on higher ground to resist surface water pooling, 2) a safe distance from sources of contamination, 3) where it can be easily serviced?
- Water demand--Is the well designed to take into account your estimated water demands?
- Water well system contractors--1) Is the contractor licensed? 2) What well construction-related records will the contractor provide you with? 3) Does the contractor have adequate insurance coverage? 4) Will the contractor provide references? 5) Will the contractor provide a written contract that spells out the terms and conditions of the job?

To learn more, visit www.WellOwner.org and check out free online lessons and webinars about well maintenance.
Click on icon to see 11 online lessons on what to test water for; how to get and understand a test; water treatment; treating arsenic, bacteria, nitrate and radon; well maintenance; groundwater protection; well flooding; and well construction.

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