

wellcare® information for you about **Methane Gas & Groundwater**

What is Methane Gas?

Methane is the largest component of natural gas. In its natural form, methane gas is colorless, odorless, and tasteless. One natural source of methane is the decomposition of plant and animal waste. Methane gas may enter groundwater through natural or industrial processes.

Other sources of methane gas include coal mines, wastewater treatment, landfills, natural gas and petroleum systems, and certain agricultural and industrial processes. Before being used as a fuel, methane gas is mixed with an odorant, as a safety measure to help detect leaks.

What are the health effects of Methane Gas?

Since it evaporates out of water, methane is not usually considered to present a health threat in drinking water. However, methane gas can become harmful if it escapes from water and builds up in poorly ventilated or confined areas.

When present at high concentrations, methane gas acts as an asphyxiate. Asphyxiates displace air and can cause breathing and other health problems.

Another risk at higher concentrations is an explosion danger. Methane typically forms an explosive mixture in the air at concentrations of 5% to 15% by volume. Other factors such as water temperature, ventilation of the well, air movement inside the home, and the percent composition of the gas determine the exact concentration that is capable of producing an explosive hazard.



If your well water contains methane concentrations above 28 milligrams per liter (mg/L), the U.S. Department of the Interior, Office of Surface Mining suggests that you take immediate action to reduce this concentration. Methane concentrations below 10 mg/L are generally considered safe. Wells with levels between 10 and 28 mg/L should be regularly monitored, and well owners may wish to consider treatment to lower the methane level.

Should I test my water for Methane Gas?

If you suspect your water may contain methane gas, you should have your water tested. Contact your state or local health department for a list of state-certified laboratories in your area. Methane can be difficult to detect in water, so it is important that a certified laboratory perform the test. You may also be advised to test your air for methane gas.

What can be done to remove methane gas from drinking water?

Methane can be vented from some wells. A water well contractor in your area can provide and install a well vent, usually at a low cost. Aeration is another method that can be used to eliminate methane from well water. Contact a water well professional to determine the best treatment method for your situation.

For more information about Methane Gas in Groundwater

Penn State College of Agricultural Sciences, Cooperative Extension, School of Forest Resources. (2006). Methane Gas and Its Removal from Wells in Pennsylvania. pubs.cas.psu.edu/FreePubs/pdfs/XH0010.pdf

U.S. Environmental Protection Agency (EPA). Methane. <http://www.epa.gov/methane/>

For more information to help you maintain your well and protect your water supply



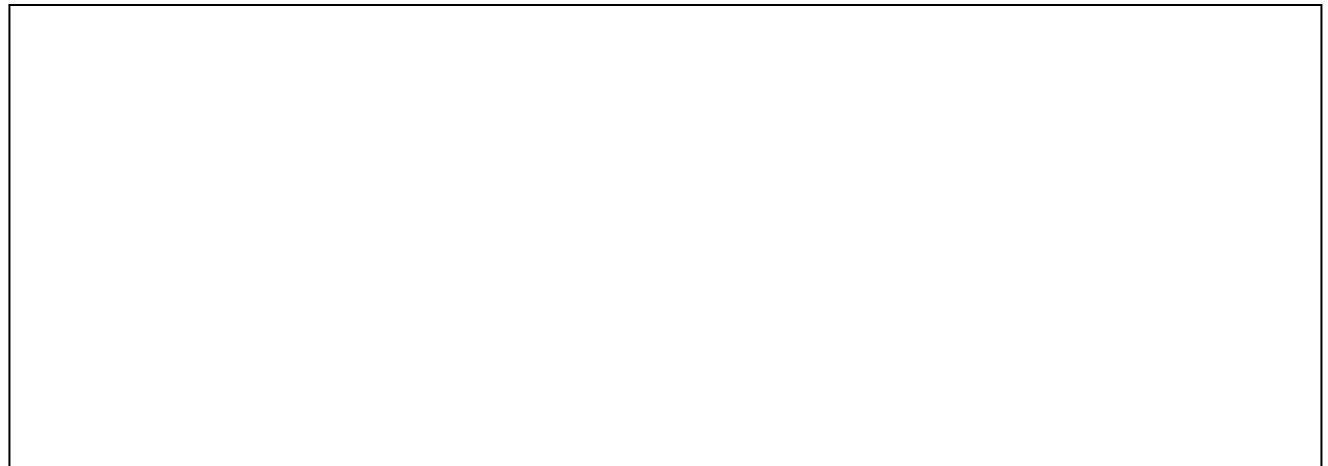
wellcare® is a program of the **Water Systems Council** (WSC). WSC is the only national organization solely focused on protecting the health and water supply of the 43 million people nationwide who depend on household wells for their drinking water supply.

This publication is one in a series of **wellcare**® information sheets. There were more than 80 available FREE on the WSC website at www.watersystemscouncil.org.

Well owners and others with questions about wells or ground water can also contact the FREE **wellcare**® hotline at 1-888-395-1033 or visit www.wellcarehotline.org

JOIN THE WELLCARE® WELL OWNERS NETWORK! You can join the well owners network and receive regular information on how to maintain your well and protect your well water...it's FREE!

Contact us at 1-888-395-1033 or visit www.wellcarehotline.org or www.watersystemscouncil.org.



This publication was developed in part under Assistance Agreement No. EM-834783-0 awarded by the U.S. Environmental Protection Agency. It has not been formally reviewed by EPA. The views expressed in this document are solely those of WSC. EPA does not endorse any products or commercial services mentioned in this publication.

well water naturally better....

Contact your local water well contractor