

## Health Risks from Nitrates

Although nitrate is found naturally, high levels in drinking water pose a serious acute health threat for infants less than six months of age. High nitrate levels interrupt normal body processes in some infants. Infants are especially susceptible because their stomach juices are less acidic and therefore are conducive to the growth of nitrate-reducing bacteria. There is also a potential for prenatal methemoglobinemia, or birth defects associated with high nitrate levels; pregnant women should avoid drinking water with nitrogen levels higher than 10 milligrams per liter. Boiling water will not reduce the nitrate concentration; in fact it actually increases the concentration by evaporating the water.

## Health Risks from Arsenic

Arsenic is an element that occurs naturally in soil and bedrock formations and has been deposited in the soil and bedrock layers over millions of years. Traces of arsenic are found in groundwater, lakes, rivers and ocean water. Foods like fruits, vegetables and seafood can contain trace amounts of arsenic. Since arsenic is a natural part of our environment, everyone is exposed to small amounts. People who are exposed to arsenic levels significantly above the standard over a period of years can experience a variety of health problems. Chronic health effects include an increased risk of cancer and other life-threatening diseases. The strongest evidence shows a link between arsenic and skin, bladder, and lung cancer, with bladder and lung cancer being the biggest concern. Other studies indicate that arsenic may have non-cancer effects including cardiovascular diseases such as high blood pressure, heart disease, and stroke; diabetes; reproductive problems; and immune and nervous system.

## Health Risks from Manganese

Well water may sometimes be contaminated with sufficiently high levels of manganese to create a potential health hazard. If drinking water is obtained from a well water source, it may be wise to have the water checked for manganese to ensure the level is below the current guideline level. Effects can vary due to age and other factors. Some effects can include brain, behavior, nervous system, reproductive, kidney, urinary issues. Can enter the body orally or dermally.

## Health Risks from Bacteria

While most coliform bacteria do not cause disease, their presence suggests there may be disease-causing microorganisms in your water. These microorganisms can cause diarrheas, dysenteries, salmonellosis, hepatitis, and giardiasis. Symptoms include diarrhea, vomiting, cramps, nausea, headaches, fever, fatigue, and even death sometimes. Infants, children, elderly people, and people with weakened immune systems are more likely to get sick or die from disease-causing microorganisms in drinking water.

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# Private Well Grant Program



## What is the Private Well Grant Program?

The Private Well Grant Program is a program which provides funding assistance for **plugging** of abandoned wells, **well assessment, well water testing** and **rehabilitation** for your well.

The money is derived from a percentage of agriculture management account (pesticide/fertilizer taxes) of the groundwater protection fund.



## Well Plugging

All abandoned wells should be plugged, to prevent personal injury and contamination of the groundwater. Iowa law requires abandoned wells to be plugged. Backup/standby wells may be kept if they are maintained and tightly sealed to prevent contaminants from entering the well.

A landowner or a Certified Well Contractor may plug wells. (Wells plugged by landowner must be supervised by Environmental Health Staff). The well must be properly plugged using approved materials and guidelines as set forth in Chapter 39, of the Iowa Administrative Code, Environmental Protection [567].

The owner may be reimbursed for the plugging cost (up to \$700 per well). These costs include material, trucking, equipment rental and contractor fees.

To receive funds, the Environmental Health office must receive the Well Plugging IDNR form signed by the owner & well contractor, and a copy of the paid bill.

*If you have any questions on this program and the options available, or need assistance, please contact us.*



## Water Testing

This part of the program covers the cost of testing private well water used for human consumption. The test could include E.Coli, Nitrates, Coliform Bacteria, Arsenic and Manganese. For wells that qualify (limited) PFAS testing is offered.

There is no cost to you for this water test. The purpose of this testing is to provide you with information on the quality of water you drink, it would then be your choice to make any corrections. If needed, another sample can be taken after corrections are made. It is recommended to have your well tested yearly.



## Well Assessment

This part of the program covers the costs up to \$600 to have your well assessed by a professional-IDNR Certified Well Contractor. The private well assessment checklist list will need to be completed and submitted, along with a copy of the paid bill.

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## Well Renovation

This part of the program provides funds for renovating wells to prevent contamination of an aquifer. This will primarily involve repair of the upper portion of the casing but may include work on deeper portions of the casing, seals, or liners. Criteria guidelines for funding of well renovations have been set, there will be repairs that do not qualify and restrictions on other types of repairs. This portion of the grant will vary depending on the individual well in question and the type of renovation needed. It may be possible to provide up to \$2000 cost reimbursement per well for renovation work. Usually, wells with brick, limestone or stone casing are not good candidates.



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