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Drinking Water Problems: Nitrates

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Aquifer Facts Coloring Book

Aquifer Quiz

Aquifer Quiz Answer Sheet

Safe Drinking Water Resources

Cover photo by Texas A&M AgriLife Extension

Contaminants in drinking water can be a concern for any water well owner. Although most of the water in Texas is safe to drink, there are some contaminants that can be of concern in some areas. For most details, nitrates are unlikely to be harmful, even at high concentrations, but there are some cases where nitrate levels should be of concern.

This article discusses nitrate in water and what you need to know about your drinking water. Nitrate is a form of nitrogen that is a nutrient for plants and can be used more. For most details, nitrates are unlikely to be harmful, even at high concentrations, but there are some cases where nitrate levels should be of concern.

Who regulates drinking water safety?

The Safe Drinking Water Act (SDWA) Congress passed the Safe Drinking Water Act in 1974. The law requires the U.S. Environmental Protection Agency (EPA) to establish minimum standards for public water systems. The standards are intended to ensure that the water is safe to drink. The SDWA also requires the EPA to establish a program to protect underground sources of drinking water. Public water systems can reasonably be required to remove from drinking water, pollutants that are harmful to people. The Maximum Contaminant Level Goals (MCLG) and Maximum Contaminant Levels (MCL) The MCLG, or maximum contaminant level goal, is the ideal level, or goal, for a specific contaminant to be in drinking water. The MCL, or maximum contaminant level, is the legal limit for a specific contaminant in drinking water. The MCL is the level that public water systems can reasonably be required to remove from drinking water, given economic considerations. The MCL is usually lower than the maximum contaminant level goal (MCLG).

remove contaminants affecting health. For a list of drinking water treatment units that have NSF certification, visit http://www.nsf.org/Certified/DWTU.

If you have questions about whether a particular product is certified, contact the NSF Consumer Hotline at 877-8-NSF-HELP or info@nsf.org or by writing to: NSF International, NSF International, P.O. Box 130140, 789 N. Dixboro Road, Ann Arbor, MI 48113-0140.

Please note: If a product has an EPA registration number, this merely indicates that the unit is registered with the EPA. It does not imply EPA approval or certification.

How to keep it working

No matter what treatment technology is being used, some sort of maintenance will be required to keep the system operating properly. The first step to proper operation and maintenance is proper installation. Qualified installers:

- Carry liability insurance for property damage during installation
- Are accessible for service calls
- Accept responsibility for minor adjustments after installation
- Give a valid estimate of the cost of installation

After your system is installed, it will need to be maintained properly. If you have an RO unit, replace the membranes as necessary. Periodically remove scales and other solids that collect in the still and dispose of them properly.

For ion exchange units, replace or recharge the resin regularly. Maintain and change all filters as needed.

All systems should be operated according to the manufacturers' specifications. If a system treats more water than it is designed for in a certain period, the treatment may be ineffective and quality of the treated water may drop.

Treated water should be tested regularly to ensure that the system is operating properly. The best times of the year to test for nitrate concentration is in the spring and fall because nitrate is typically the highest in raw water sources then.

Although new home-based tests are better than those previously used, the best way to have water tested is by a certified lab. For a lab in your area, consult your local health department, the county office of Texas Cooperative Extension or the TCEQ's list of water testing laboratories mentioned earlier.

For more information

"Choosing home water treatment devices," Water Facts: Number 7. Arizona Cooperative Extension. Available at http://ag.arizona.edu/pubs/water/az9420.pdf.

"Drinking Water Treatment: Distillation." Nebraska Cooperative Extension. Available at http://ianrpubs.unl.edu/water/g1493.htm.

Lahlou, M. Z. "Point-of-Use/Point-of-Entry Systems." Morgantown, WV: National Drinking Water Clearinghouse. 2003. Available at http://www.nesc.wvu. edu/ndwc/articles/OT/SP03/TB_Point_of_Use.html.

"Water Quality: Distillation." Kansas State University Cooperative Extension Service. Available at http://www.oznet.ksu.edu/library/H20QL2/MF885.PDF.

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Do you have a question -or- need to contact an expert?

Contact Your County Office