NORTH DAKOTA
DEPARTMENT of HEALTH

Arsenic Trioxide Superfund Site Fact Sheet

What you should know if you drink water from a well

Contacts

Carl Anderson, Supervisor
Groundwater Protection Program
North Dakota Dept. of Health
Water Quality Division
918 East Divide Avenue
Bismarck, N.D. 58501-1947
701-328-5213
www.ndhealth.gov

Southeast Water Users District
206 Main Street
PO Box 10
Mantador, N.D. 58058-0010
701-242-7432
www.seh2o.com

Fran Costanzi, Project Manager
U.S. EPA, Region 8
1595 Wynkoop Street (EPR-SR)
Denver, CO 80202-1129
303-312- 6571
800-227-8917 (toll free Region 8)
www2.epa.gov/region8/arsenic-trioxide

Drinking-Water Well Users May Be at Risk

Homeowners and potential buyers of homes with existing water wells in Richland and Sargent counties in North Dakota, as well as anyone considering drilling a new well in the area, should be aware that shallow aquifer groundwater may contain elevated levels of arsenic.

The U.S. Environmental Protection Agency (EPA), in cooperation with the North Dakota Department of Health (NDDoH) and the Southeast Water Users District (SEWUD), has taken steps to remedy the health risk posed by arsenic in the area identified as the Arsenic Trioxide Superfund Site. The area encompasses about 936 square miles in southeast North Dakota and includes 26 townships.

What is Arsenic, and Why is It a Problem?

As_2O_3

Arsenic is a toxic chemical that occurs naturally in the environment in the soil, rocks and minerals. It can also appear as a by-product of agricultural and industrial use. In Richland and Sargent counties, arsenic-laced bait was used extensively to combat grasshopper infestations during the 1930s and early 1940s. The bait was commonly applied to farm fields, and unused materials were often buried or dumped in pits or low-lying areas.

In 1979, in the communities of Lidgerwood, Wyndmere and Milnor, shallow wells in the shallow upper were discovered to contain arsenic at concentrations above the drinking water standard of 50 parts per billion (ppb). Arsenic was also found in wells at private homes and farms in unincorporated areas. In 2006, the standard for arsenic was changed from 50 ppb to 10 ppb, which is roughly equivalent to a few drops of ink in an Olympic-size swimming pool.

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Some people who drink water containing arsenic in excess of the standard over many years could experience adverse health effects, such as skin damage or circulatory system problems, and may have an increased risk of getting cancer. Short-term exposure to high doses of arsenic in drinking water (about a thousand times higher than the 10 ppb drinking water standard) can also cause adverse effects in people. Such exposures are not known to occur from public water supplies in the U.S. that comply with the drinking water standard for arsenic.

What Should I Do to Limit My Risk?

Owners of existing groundwater wells should determine if their water has been tested for arsenic levels. NDDH, in Bismarck, N.D., maintains records of previously tested wells and will provide results to owners at no charge. If your well has not been tested, contact NDDoH for more information or view the brochure at www.ndhealth.gov/WQ/GW/pubs/WellTestingBrochure.pdf.

Should arsenic levels exceed the 10 ppb drinking water standard, owners of wells with water intended for household use (drinking, cooking, etc.) have several options:

- Household point-of-use treatment—water purification units installed at owners' homes,
- Connection to the public water supply—contact SEWUD for details, or
- Using bottled drinking water.

These are options for well owners to consider. The well owner is responsible for the costs related to these options.

What Happens Next?

EPA and NDDoH have completed the remediation activities at the site, which has included the connection of cities to public water systems, the expansion of SEWUD water treatment facilities and the installation of pipelines to connect rural users to the public water supply.

Ongoing measures include the creation of Institutional Controls (ICs) by EPA and NDDoH. ICs are "non-engineered instruments," such as administrative and legal controls, that will help minimize the potential for human exposure to arsenic contamination in the future and protect the integrity of existing remedies. This fact sheet is a part of the IC for the Arsenic Trioxide Superfund Site.

Townships in the Arsenic Trioxide Superfund Site

Richland County

- Barney
- Belford
- Brightwood
- Danton
- Dexter
- Duerr (East)
- Duerr (West)
- Elma
- Grant
- Homestead
- Liberty Grove
- Moran
- West End
- Wyndmere

Sargent County

- Dunbar
- Hall
- Herman
- Kingston
- Marboe
- Milnor
- Ransom
- Rutland
- Shuman
- Tewaukon
- Weber
- Willey

SOUTHEAST WATER USERS