

NITRATE IN YOUR WELL WATER

Tips to Protect Your Well Water



Pivate wells can provide a clean, safe source of water if they are properly located, built, and maintained. As a private well owner, it is your responsibility to make sure that your water is safe to use by testing for contaminants. This brochure provides information on nitrate and helps you understand the possible health effects of drinking water with high levels of nitrate.

WHAT ARE THE HEALTH CONCERNS?

Nitrate can be converted to nitrite in the human body where it lessens the ability of blood to carry oxygen. This is of greatest concern for infants, pregnant, and nursing women. In infants less than 6 months old, nitrate levels above 10 mg/L in drinking water can reduce the amount of oxygen in the child's blood and cause blue baby syndrome. This is a very dangerous condition with symptoms including shortness of breath and a bluish tint to the skin indicating the baby is not getting enough oxygen.

WHAT CAN I DO TO REMOVE NITRATE FROM MY WATER?

NSF International certified treatment devices such as reverse osmosis, distillation, and ion exchange systems can be used to remove nitrate from water. To determine the best method of removing nitrate from your well, call the NSF International Consumer Hotline at 1-800-673-8010.

If your test level is above 10 mg/L, do not use the water to make baby formula and do not drink the water if you are pregnant or nursing. Note: Boiling water will not remove nitrate.

WHAT IS NITRATE?

Nitrate is a compound that can be found in private well water. High levels of nitrate in drinking water are often caused by groundwater contamination from animal waste run-off at dairies and feedlots, excessive use of fertilizers, or seepage of human sewage from private septic systems.

POSSIBLE HEALTH RISKS BY LEVEL OF NITRATE

| Nitrate Level | Interpretation |
|---------------|---|
| 0-10 mg/L | Safe for humans and livestock. However, concentrations of more than 5 mg/L are an indicator of possible pollution sources and could cause environmental problems. |
| 11-20 mg/L | Not safe for infants, can cause blue baby syndrome. Generally safe for adults and livestock. |
| 21-40 mg/L | Should not be used as a drinking water source except for short-term use for adults and livestock. |
| 41-100 mg/L | Risky for adults and young livestock. Probably acceptable for mature livestock if feed is low in nitrate. |
| Over 100 | Should not be used by humans and livestock. |

*Table adapted from Utah State University Extension
mg/L = milligrams per liter of water*



IDAHO DEPARTMENT OF HEALTH & WELFARE
DIVISION OF PUBLIC HEALTH

HEALTH DISTRICT CONTACT INFORMATION

Panhandle Health District

208-415-5200

www.phd1.idaho.gov

(serving Benewah, Bonner, Boundary, Kootenai and Shoshone counties)

North Central Health District

208-799-3100

www.idahopublichealth.com

(serving Clearwater, Idaho, Latah, Lewis, and Nez Perce counties)

Southwest District Health

208-455-5400

www.publichealthidaho.com

(serving Adams, Canyon, Gem, Owyhee, Payette and Washington counties)

Central District Health

208-375-5211

www.cdhd.idaho.gov

(serving Ada, Boise, Elmore and Valley counties)

South Central Public Health District

208-737-5900

www.phd5.idaho.gov

(serving Blaine, Camas, Cassia, Gooding, Jerome, Lincoln, Minidoka, and Twin Falls counties)

Southeastern Idaho Public Health

208-233-9080

www.sdhdidaho.org

(serving Bannock, Bear Lake, Bingham, Butte, Caribou, Franklin, Oneida, and Power counties)

Eastern Idaho Public Health District

208-522-0310

www.phd7.idaho.gov

(serving Bonneville, Clark, Custer, Fremont, Jefferson, Lemhi, Madison, and Teton counties)

IDAHO DEPARTMENT OF WATER RESOURCES

Licensed Well Drillers

www.idwr.idaho.gov/apps/well/licensedwelldrillers/

Ground Water Protection Section

Boise: 208-287-4800

www.idwr.idaho.gov

Northern Region, Coeur d'Alene: 208-769-1450

Eastern Region, Idaho Falls: 208-525-7161

Southern Region, Twin Falls: 208-736-3033

Western Region, Boise: 208-334-2190

IDAHO DEPARTMENT OF AGRICULTURE Water Program

Boise Office 208-332-8597

www.agri.state.id.us

IDAHO DEPARTMENT OF HEALTH AND WELFARE

Bureau of Community and Environmental Health

1-866-240-3553

www.healthandwelfare.idaho.gov

bceh@dhw.idaho.gov

Idaho Bureau of Laboratories

208-334-2235

www.statelab.idaho.gov

statelab@dhw.idaho.gov

NSF INTERNATIONAL

Consumer Hotline 1-800-673-8010

www.nsf.org

WHAT CAN I DO TO MAINTAIN MY WATER SYSTEM?

If you install a treatment device, follow the manufacturer's suggested maintenance schedule to be sure your water is safe. Also, your well should be maintained to keep it in good working order. To help keep track of well maintenance, it is recommended that you create and maintain a "system maintenance log." The log should include the location of the well, construction and contractor details, as well as results of any water tests. A copy of a log is available by calling the Idaho Department of Health and Welfare at 1-866-240-3553. For questions about your well water, contact your local public health district.

SUGGESTED TESTING SCHEDULE

The table below shows how often you should test your well for contaminants.

| Contaminants | How often should I test? |
|--------------------------------|--------------------------|
| Arsenic Uranium Fluoride | Once every 3 to 5 years |
| Bacteria Nitrate | Once a Year |