

## Test your well water!

The Office of Environmental Health recommends that all private wells be tested at least once per year for total coliform bacteria and nitrates. You should test your well for arsenic, fluoride, and uranium every five years.

## In addition to the schedule above, test your well when:

There are **known problems** with well water in your area.

You have experienced **problems near your well** (flooding, wildfire, land disturbances, nearby waste disposal sites).

You notice a change **in water quality** (taste, color, odor).

If anyone in your family has an **unexplained illness**.

Independent laboratories can test the water from your private well.

For a list of current laboratories certified for testing water samples:

Visit <http://azhealth.gov/labs4h2o>

Or call (602) 364-0720

Office of Environmental Health

150 N 18th Avenue, Suite 140

Phoenix, AZ 85007

Phone: (602) 364-3118

Fax: (602) 364-3146

Toll Free: (800) 367-6412

[www.azhealth.gov](http://www.azhealth.gov)



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

# What You Should Know About Nitrates

in Arizona Private Wells



# NITRATES

and nitrites are molecules composed of nitrogen and oxygen atoms.

Nitrates can be present naturally in soils. They can also be present due to septic tanks, animal waste, sewers, and fertilizers. Because **private wells** are the primary source of water for rural residents of Arizona, making sure the water is free of nitrate is important.

## How much nitrate is too much nitrate?

The EPA lists the Maximum Contaminant Level (MCL) for nitrate in drinking water as **10 PPM** (parts per million\*).

Private wells in Arizona are not regulated and are not required to meet the standards that public water systems must follow.

\*A part per million means that for every million parts of water, there is one part nitrate.

## Health Effects of Nitrate Exposure

When people are exposed to a chemical, the health effects that may result depend on the concentration of the chemical and the duration of exposure.

**High amounts of nitrate** can lead to a condition called “methemoglobinemia,” also known as “Blue Baby Syndrome.” Nitrates can affect the blood’s ability to carry oxygen, which can lead to decreases in blood pressure and gastrointestinal problems.



“**Blue baby syndrome**” is preventable. Infants 6 months old and younger are particularly sensitive to high levels of nitrate.

**Do not give** water to young children if it contains over 10PPM nitrates.

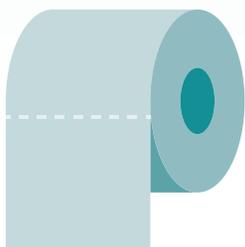
## How can I remove nitrate from my water?

Nitrates cannot be removed by boiling the water before use. Concentrations of nitrates in drinking water can be lowered by these methods:

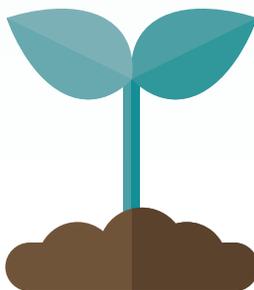
- Distillation
- Reverse osmosis
- Ion exchange

For more information on home water treatment systems, please visit the University of Arizona Water Resources Research Center at <https://wrrc.arizona.edu/resources>

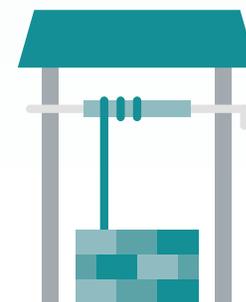
## What can I do to protect my well from nitrate contamination?



Look for **sources of waste** near or upslope of the wellhead, such as pastures or animal pens. Ensure that your septic system is working properly. Leaking septic systems can leach nitrates and bacteria into your water supply.



Avoid using **high amounts of fertilizers** on your property. Fertilizers can enter the water supply as runoff or by filtering through soil. Do not apply fertilizer before a rain event.



Ensure your **well is properly constructed**. Cracks in the casings or pipes may allow contaminants from runoff to enter your water supply. Call a registered well driller for information on well maintenance and upkeep.