

## What is nitrate?

Nitrate is formed in the soil when nitrogen and oxygen combine. Fertilizers, septic systems, and livestock waste contribute additional nitrate, so elevated nitrate is most often found in rural and agricultural areas. Since the Santa Clara Valley has a long history of agricultural production and septic systems are still in use in some areas, nitrate is an ongoing groundwater protection challenge, particularly in South County.

## How does nitrate get into my well water?

Nitrate travels easily through the soil, carried by rain or irrigation water into groundwater. Wells that are more likely to have nitrate contamination include ones that are shallow, near a source, located in sandy soil, and are improperly constructed or maintained.

## Does nitrate pose a health risk?

Nitrate can interfere with the blood's ability to transport oxygen, causing a condition called methemoglobinemia. It is of greatest concern for infants and pregnant women, and the effects of nitrate are often referred to as "blue baby syndrome." For more information on the health effects of nitrate, please see the State Water Resources Control Board website at [www.waterboards.ca.gov](http://www.waterboards.ca.gov) or consult your health care provider.

## What is safe level of nitrate in drinking water?

Nitrate is a regulated drinking water contaminant in California. The maximum contaminant level is 10 milligrams per liter (mg/L) for nitrate as nitrogen (N). Public water systems are required to ensure water delivered to consumers meets all drinking water standards.

## What is the Valley Water doing about nitrate?

Santa Clara Valley Water District (Valley Water) works with stakeholders and other agencies to:

- define the extent and severity of nitrate contamination,
- identify potential sources of nitrate,
- reduce nitrate loading to groundwater, and
- reduce customer exposure to elevated nitrate.



Valley Water efforts include groundwater recharge (which helps to dilute nitrate), groundwater monitoring, public outreach, and collaboration with other agencies. Valley Water led efforts to develop regional salt and nutrient management plans, which provide a framework for ensuring groundwater remains protected in the future.

To reduce customer exposure to elevated nitrate, Valley Water is offering rebates for treatment systems for eligible private well users. See "What can I do if my well water is high in nitrate?" on the back page for more information.

## Do I need to test my water for nitrate?

If your water comes from a public water supply, such as a city or water company, it is tested regularly to ensure that it meets drinking water standards. Contact the agency that provides your water bill to get more information on water quality, including nitrate.

If your water comes from a domestic well, you are responsible for ensuring it is safe to drink. Because nitrate is colorless and odorless, the surest way to tell if you have nitrate in your water is to have it tested. Valley Water encourages domestic well owners to have their well water tested annually by a state-certified laboratory. Testing should be more frequent if there is a change in the water taste, odor, or appearance.

Domestic well owners may be eligible for free water quality testing by Valley Water. Visit <https://delivr.com/2jgt8> or call us at (408) 630-2300.

## What do the results of my water test mean?

Lab results should be interpreted carefully since nitrate can be measured as NO<sub>3</sub> (nitrate) or as N (nitrogen). The state drinking water standard for nitrate as N is 10 mg/L. This is equivalent to 45 mg/L for nitrate as NO<sub>3</sub>. Results above these standards would require action by a public drinking water system, such as blending or treatment. Although domestic wells are not subject to drinking water standards, these standards provide context to help interpret the results of your water test.

## What can I do if my well water is high in nitrate?

If the level of nitrate in your water is higher than the drinking water standard, you may want to consider installing a treatment system or using an alternate source of water for drinking, cooking, and mixing baby formula. Boiling the water does not remove nitrate but may instead increase the nitrate concentration.

Valley Water is offering rebates up to \$500 for eligible domestic well users that purchase and install treatment systems to reduce elevated nitrate. Visit <https://delivr.com/2jyay> or call us at (408) 630-2300 for more information.

The State Water Resources Control Board maintains a list of residential water treatment devices certified to reduce nitrate at <https://delivr.com/2tjhd>. Water treatment system vendors are also listed in the yellow pages under "Water Filtration & Purification Equipment". Valley Water recommends that you ask for assurance from the vendor or manufacturer that the system you are considering will work for your situation.

## How can I guard against nitrate in my water?

Fertilizer, septic systems, and animal waste are all potential sources of nitrate contamination. Valley Water's Guide for the Private Well Owner (<https://delivr.com/2f277>) offers helpful information on water quality testing, well maintenance, and groundwater protection. The following guidelines will help to reduce the risk of nitrate contamination:

**1. Ensure proper well location, construction and maintenance:** Wells should be located uphill (upgradient) and at least 100 feet away from septic tanks, leach fields, animal confinement areas, and fertilized areas. The well casing should extend above the ground and surface runoff should be directed away from the wellhead. The concrete slab on the wellhead should be intact.

**2. Perform proper septic system maintenance:** To help avoid system failure that can lead to contamination and the need for costly repairs, maintain your system according to the specifications and consider the tips below:

- Don't drive or park heavy equipment over your septic tank, drain pipes or leach field.
- Avoid planting trees or shrubs near drain pipes or the leach field as roots can clog the lines.
- Don't dispose of hazardous chemicals or non-biodegradable materials in your toilet or drain.
- Install a lint trap on your washing machine.
- Conserve water.
- Have your septic tank inspected and pumped every three to five years (more often if you have a garbage disposal).
- If you have two leach fields, switch them every year.

**3. Reduce your fertilizer use:** Use fertilizers only when necessary and according to the manufacturer's instructions.

## CONTACT US

For more information, contact the Groundwater Hotline at **(408) 630-2300**. To find out the latest information on Valley Water projects or to submit questions or comments, use our **Access Valley Water** customer request system at <https://delivr.com/2yukx>.



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