Valley Water

# Annual Groundwater Quality Summary

Did you know that groundwater is an essential local water resource, providing about half of the water used in Santa Clara County? The Santa Clara Water District (Valley Water) is committed to ensuring sustainable water supplies now and in the future. Valley Water's 2019 groundwater quality testing indicates generally high groundwater quality. We remain steadfast in our efforts to maintain this level of groundwater quality.

## Valley Water works to safeguard groundwater by:

- Replenishing groundwater with local and imported surface water.
- Reducing the demand on groundwater with alternative water sources, water conservation, and water recycling.
- Monitoring groundwater quality and water levels.
- Implementing programs to protect groundwater from contamination.

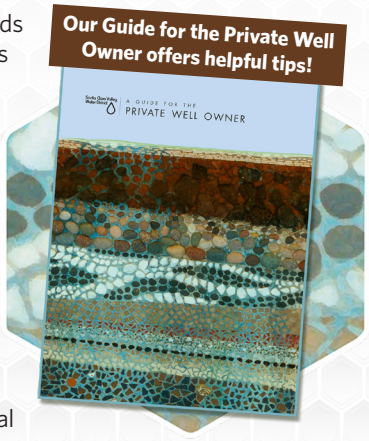
## You can help protect groundwater by:

- Maintaining wells and septic systems and avoiding the use or storage of potential contaminants near wells.
- Conserving water and by raising awareness that activities above ground can affect our largest drinking water reservoir, which is beneath our feet.

Clean Water • Healthy Environment • Flood Protection

## What influences groundwater quality?

As water travels over the land and through the ground, it dissolves naturally occurring minerals and may also pick up substances from animal and human activities, such as:

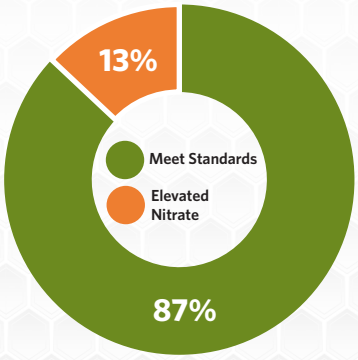



- Inorganic compounds like salts and metals from natural or industrial sources, animal facilities, farming, and mining.
- Organic chemicals from industrial processes, gas stations, dry cleaners, agricultural uses, and septic systems.
- Insecticides, herbicides, and fertilizers from agricultural and residential uses.
- Viruses and bacteria from sewage treatment plants, sewer lines, septic systems, agricultural operations, and wildlife.
- Radioactive elements that are naturally occurring.

## How do I know if my water is safe?

State and federal drinking water standards identify contaminant levels that relate to health risk. Public water systems must meet these standards, but domestic wells are not regulated. Valley Water tests regional groundwater quality, but every property and well is unique, so we encourage domestic well owners to regularly test their water. The most common contaminant found in Santa Clara County is nitrate.

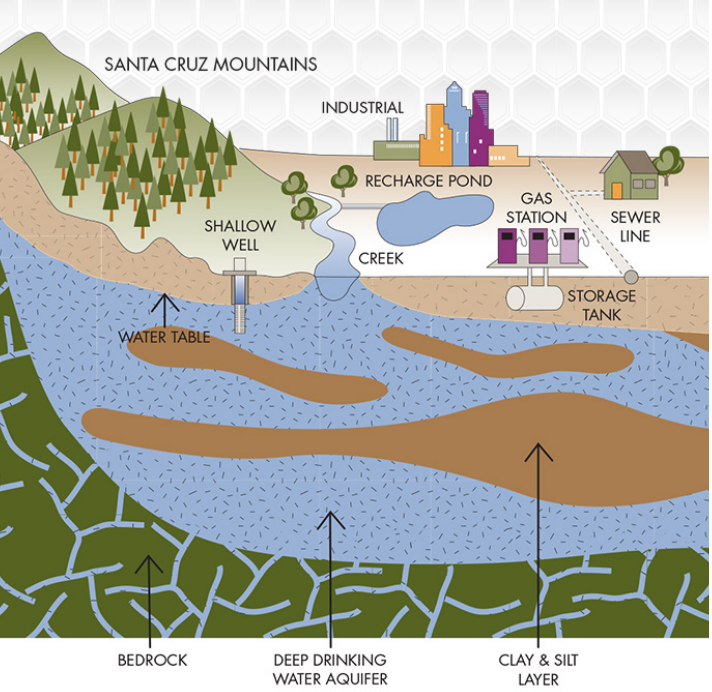
**Water Supply Wells Tested Meeting Drinking Water Standards**

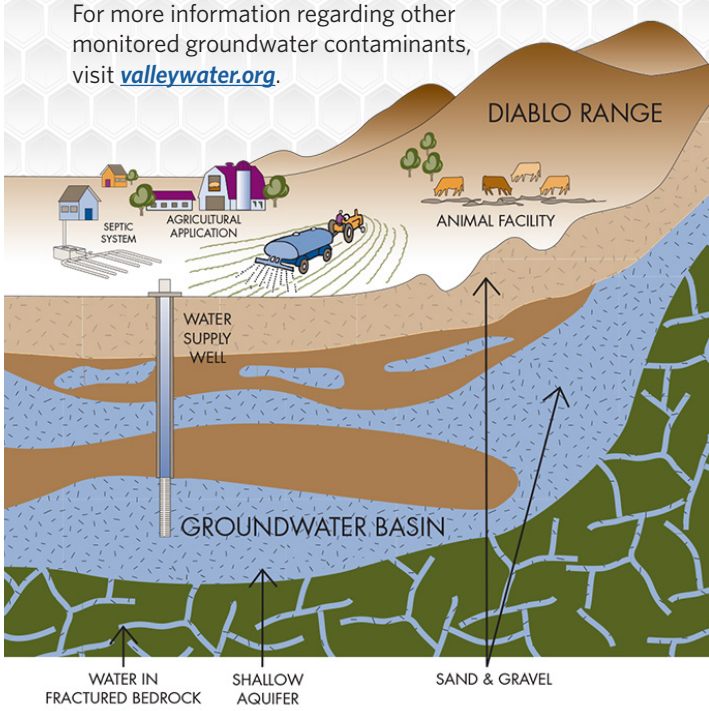



**Notes:**
1. Graph shows primary drinking water standards.
2. All wells not meeting primary drinking water standards were South County wells with high nitrate (above 10 milligrams per liter).

Nitrate is present above the drinking water standard in many South County domestic wells due to fertilizers, septic systems and livestock waste. Nitrate can interfere with the blood's ability to transport oxygen and is of greatest concern for infants and pregnant women as it can cause serious illness; symptoms include shortness of breath and blueness of the skin.

For more information regarding other monitored groundwater contaminants, visit ***valleywater.org***.



| | | | | | North County | | South County | |
|---|---|---|---|---|---|---|---|---|
| | Primary Drinking Water Standards | Units | MCL | Sources | Median | Range | Median | Range |
| Inorganic Contaminants | Aluminum | ppb | 1,000 | a | 16 | ND - 200 | 25 | ND - 180 |
| | Arsenic | ppb | 10 | a,b | ND | ND - 3 | ND | ND - 4 |
| | Asbestos | MFL | 7 | a | -- | -- | 1.0 | ND - 1.4 |
| | Barium | ppb | 1,000 | a | 115 | ND - 260 | 79 | ND - 190 |
| | Chromium (total) | ppb | 50 | a,b | 2.9 | ND - 7.2 | 1.1 | ND - 1.7 |
| | Copper[1] | ppb | 1,300 | a,c | 2 | ND - 6.7 | 1.7 | ND - 8.1 |
| | Cyanide | ppb | 150 | a | ND | ND - 77 | ND | ND |
| | Fluoride (Natural Source) | ppm | 2 | a | 0.12 | ND - 0.29 | 0.13 | ND - 0.67 |
| | Lead[1] | ppb | 15 | a,b,c | ND | ND - 4.6 | ND | ND - 1.0 |
| | Nickel | ppb | 100 | a,b | ND | ND - 1.3[3] | ND | ND - 7.1 |
| | Nitrite (as N) | ppb | 1 | a,d | ND | ND | ND | ND - 0.5 |
| | Nitrate + Nitrite (as N) | ppm | 10 | a,d | 2.8 | 0.93 - 5.7 | 1.2 | ND - 4.6 |
| | Nitrate (as N) | ppm | 10 | a,d | 3.1 | ND - 8.7 | 5.8 | ND - 42 |
| | Perchlorate | ppb | 6 | e | ND | ND | ND | ND - 4.8 |
| | Selenium | ppb | 50 | a | ND | ND - 5.4 | ND | ND - 7.0 |
| Radioactive Contaminants | Gross Alpha | pCi/L | 15 | a | ND | ND - 6.5 | 1.5 | 0.72 - 3.3 |
| | Strontium-90 | pCi/L | 8 | a | 0.14 | 0.14 | -- | -- |
| Volatile Organic Compounds | 1,1,1-Trichloroethane (1,1,1-TCA) | ppb | 200 | b,f | ND | ND - 1.3 | ND | ND |
| | 1,1-Dichloroethene (1,1-DCE) | ppb | 6 | b | ND | ND - 0.78 | ND | ND |
| | Tetrachloroethene (PCE) | ppb | 5 | b,f | ND | ND | ND | ND - 2.4 |
| | Total Trihalomethanes (THMs) | ppb | 80 | g | ND | ND - 7.08 | -- | -- |
| | | | | | Present | Absent | Present | Absent |
| Microbiological Contaminants[2] | E. Coli Bacteria | P/A | -- | h | 0 | 12 | 5 | 135 |
| | Total Coliform Bacteria | P/A | -- | i | 4 | 8 | 39 | 101 |
| | **Secondary Drinking Water Standards** | **Units** | **MCL** | **Sources** | **Median** | **Range** | **Median** | **Range** |
| | Chloride | ppm | 250 | a,j | 48 | 31 - 83 | 50 | 14 - 155 |
| | Color | Color units | 15 | a | ND | ND - 7 | 3 | ND - 5 |
| | Iron | ppb | 300 | a,b | 56 | ND - 2,100 | ND | ND - 2,800 |
| | Manganese | ppb | 50 | a,b | ND | ND - 84.1 | ND | ND - 150 |
| | Odor Threshold | TON | 3 | a | ND | ND - 4 | ND | ND |
| | pH | pH units | 6.5 - 8.5 | a,k | 7.7 | 6.5 - 8.7 | 7.4 | 6.7 - 8.0 |
| | Specific Conductance | uS/cm | 900 | a,j | 700 | 139 - 1,100 | 632 | 422 - 1,260 |
| | Sulfate | ppm | 250 | a,b | 44 | 8 - 120 | 38 | ND - 214 |
| | Total Dissolved Solids (TDS) | ppm | 500 | a | 410 | 272 - 660 | 396 | 22 - 1,640 |
| | Turbidity | NTU | 5 | l | 0.21 | ND - 3.4 | 0.24 | ND - 2.6 |
| | Zinc | ppb | 5,000 | a,b | 13 | ND - 19 | 7.2 | ND - 57 |

## Water Quality Summary

In 2019, Valley Water sampled over 160 domestic wells and evaluated data from over 225 public water supply wells. Nearly all wells tested meet drinking water standards except for nitrate in some South County domestic wells.

This table summarizes results for detected parameters that have a drinking water standard. Not every well was tested for all substances listed. Comprehensive results are reported in the most recent Annual Groundwater Report at ***valleywater.org***. Maximum Contaminant Levels (MCLs) apply only to public water systems but are useful guidelines for domestic wells. This regional summary may not reflect the water quality in individual wells since every property and well is unique.

## Table Notes

1) Lead and copper do not have MCLs but have "action levels" as shown, and are regulated by the state for public water systems since they can adversely affect public health.

2) Public water systems are required to ensure that fewer than 5% of samples per month have total coliform present and that no samples have e. coli present. Domestic wells are not subject to these standards.

3) One high nickel result (41 ppb) was not confirmed by follow-up testing. The next highest level measured was 1.3 ppb as shown.

## You live on a groundwater basin.


## Table Terms and Definitions

**Maximum Contaminant Level (MCL)**: the highest level of a contaminant allowable in public water systems. Primary MCLs are health-based regulatory standards. Secondary MCLs are aesthetic standards and relate to the taste, odor, or appearance of drinking water.
**Median**: the "middle" value of the results, with half of the values above the median and half of the values below the median.
**--**: indicates there is no related drinking water standard or that the substance was not tested or detected.
**MFL**: million fibers per liter
**ND**: not detected (at laboratory reporting limit)
**ppm**: parts per million (milligrams per liter)
**ppb**: parts per billion (micrograms per liter)
**pCi/L**: picoCuries per liter (a measure of radiation)
**TON**: threshold odor number
**pH units**: measure of pH
**uS/cm**: microSiemens per centimeter (a measure of the dissolved inorganic salt content)
**NTU**: nephelometric turbidity units

## Typical Sources for Listed Substances

a: Erosion of natural deposits
b: Discharge of industrial and manufacturing wastes
c: Internal corrosion of household water plumbing systems
d: Agricultural runoff and leaching of fertilizers, septic tanks, and sewage
e: Solid rocket propellant, fireworks, explosives, flares, matches, and other industrial sources
f: Industrial process, dry cleaners, automotive repair shops, leaking underground fuel tanks, and other industrial sources
g: Drinking water chlorination
h: Human and animal fecal wastes
i: Naturally occurring in environment
j: Seawater influence
k: Carbon dioxide emissions; rainfall
l: Soil runoff

## Valley Water Programs for Well Owners

Individual well owners are responsible for making sure their water is safe to drink, but Valley Water offers several programs to help.

**Domestic Well Testing**
Valley Water offers free water quality testing for eligible Santa Clara County domestic well users. Testing includes common contaminants like nitrate and bacteria.

**Nitrate Treatment Rebates**
To reduce exposure to elevated nitrate, Valley Water offers rebates of up to $500 to domestic well owners for nitrate treatment systems. Certain restrictions apply.

For more program information, visit ***valleywater.org*** or call the Groundwater Hotline at (408) 630-2300.

## Additional Resources

For more information about contaminants and potential health effects, the following resources are available:

- U.S. Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791
- California Division of Drinking Water (*www.waterboards.ca.gov/drinking_water/programs*)
- Your healthcare provider

## Contact Us information

For more information, contact **Victoria Garcia** at **(408) 630-3136** or by e-mail at ***VGarcia@valleywater.org***. 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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