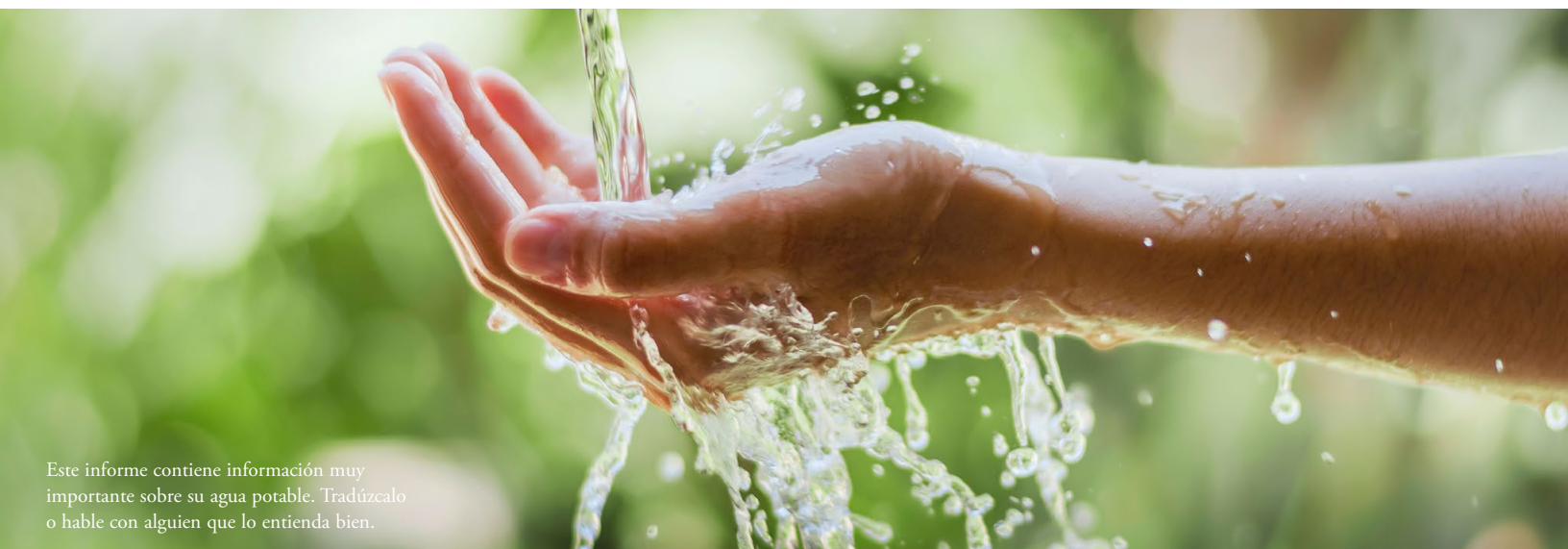




ANNUAL WATER QUALITY REPORT

Reporting Year 2023



Este informe contiene información muy importante sobre su agua potable. Tradúzcalo o hable con alguien que lo entienda bien.

Presented By



PWS ID#: CA1910130



Our Commitment



We are pleased to present to you this year's annual water quality report. This report is a snapshot of last year's water quality covering all testing performed between January 1 and December 31, 2023. Included are details about your sources of water, what it contains, and how it compares to standards set by regulatory agencies. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water and providing you with this information because informed customers are our best allies.

From the General Manager

As we know, many people around the globe do not have access to safe drinking water. The quality of water used for drinking, cooking, and agriculture directly affects public health, safety, and welfare. Quartz Hill Water District (QHWD) has a long-standing history of - and will always remain dedicated to - providing clean, healthy, and pure water. This is accomplished by a rigorous sampling strategy. Some examples of this are monthly general physical samples and weekly bacteriological samples throughout the system. This is just one way we ensure that only the highest quality of water is delivered to our customers. Additional parameters, not shown in this pamphlet, were tested but not reported because results were below laboratory detection limits. All water quality analyses were conducted by a state-certified laboratory in compliance with SWRCB drinking water standards.

Recent storms have eased the concerns of drought for the time being. However, QHWD remains committed to pursuing long-term water supply strategies, and a focus on water quality will continue to be a priority. QHWD is also implementing key steps of our strategic plan, which is to be conservation-minded and proactive in safeguarding our finite resources by purchasing surplus surface water when it is available from AVEK, our state water contractor, and continuing to book water with the Antelope Valley Water Master each year. These and many other practices will guarantee a bright future for QHWD and preservation of one of the Antelope Valley's most precious resources: groundwater.

QHWD utilizes two sources of water: groundwater and surface water. All groundwater produced by QHWD comes from 10 wells the district owns and operates. In 2023 46 percent of the total amount of water used by QHWD came from these wells. The groundwater wells vary in depth from 500 to 600 feet and are monitored daily to ensure that only the highest quality of water is distributed through our system.

Surface water, the secondary source that supplies QHWD, comes from AVEK's Quartz Hill Treatment Plant. This source provided 54 percent of the total water used during 2023. This water is supplied to the district through two interconnections.

Please feel free to contact our office with any questions concerning this Consumer Confidence Report (CCR) at (661) 943-3170.

Respectfully,

Brent Byrne, General Manager

“When the well is dry, we know the worth of water.”

—Benjamin Franklin

Source Water Assessment

A Source Water Assessment Plan (SWAP) is available at our office. This plan is an assessment of the delineated area around our listed sources through which contaminants, if present, could migrate and reach our source water. It also includes an inventory of potential sources of contamination within the delineated area and a determination of the water supply's susceptibility to contamination by the identified potential sources.

According to the SWAP, our water system had a susceptibility rating of medium. If you would like to review the SWAP, please feel free to contact our office during regular business hours.

Community Participation

We welcome input from our ratepayers. The board of directors meets in our boardroom on the third Thursday of each month at 5:30 p.m. The public is always welcome to attend board meetings. This information is also printed and posted on the agenda, which can be found at qhwd.org/agendas/.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health-care providers. The U.S. Environmental Protection Agency (EPA)/Centers for Disease Control and Prevention (CDC) guidelines on appropriate means to lessen the risk of infection by *cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Tap vs. Bottled

Thanks in part to aggressive marketing, the bottled water industry has successfully convinced us all that water purchased in bottles is a healthier alternative to tap water. However, according to a four-year study conducted by the Natural Resources Defense Council (NRDC), bottled water is not necessarily cleaner or safer than most tap water. In fact, about 40 percent of bottled water is actually just tap water, according to government estimates.

The FDA is responsible for regulating bottled water, but these rules allow for less rigorous testing and purity standards than those required by the U.S. EPA for community tap water. For instance, the high mineral content of some bottled waters makes them unsuitable for babies and young children. Further, the FDA completely exempts bottled water that's packaged and sold within the same state, which accounts for about 70 percent of all bottled water sold in the United States.

People spend 10,000 times more per gallon for bottled water than they typically do for tap water. If you get your recommended eight glasses a day from bottled water, you could spend up to \$1,400 annually. The same amount of tap water would cost about 49 cents. Even if you installed a filter device on your tap, your annual expenditure would be far less than what you'd pay for bottled water. For a detailed discussion on the NRDC study results, visit <https://goo.gl/Jxb6xG>.

Water Conservation Tips

You can play a role in conserving water and save yourself money in the process by becoming conscious of the amount of water your household is using and looking for ways to use less whenever you can. It is not hard to conserve water. Here are a few tips:

- Automatic dishwashers use four to six gallons for every cycle, regardless of how many dishes are loaded. So get a run for your money and load it to capacity.
- Turn off the tap when brushing your teeth.
- Check every faucet in your home for leaks. Just a slow drip can waste 15 to 20 gallons a day. Fix it and you can save almost 6,000 gallons per year.
- Check your toilets for leaks by putting a few drops of food coloring in the tank. Watch for a few minutes to see if the color shows up in the bowl. It is not uncommon to lose up to 100 gallons a day from an invisible toilet leak. Fix it and you save more than 30,000 gallons a year.
- Use your water meter to detect hidden leaks. Simply turn off all taps and water-using appliances. Then check the meter after 15 minutes. If it moved, you have a leak.

Information on the Internet

The U.S. EPA (<https://goo.gl/TFAMKc>) and CDC (www.cdc.gov) websites provide a substantial amount of information on many issues relating to water resources, water conservation, and public health. Also, the Division of Drinking Water and Environmental Management website (<https://goo.gl/kGepu4>) provides complete and current information on water issues in California, including valuable information about our watershed.

Substances That Could Be in Water

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material and can pick up substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, the U.S. EPA and the State Water Resources Control Board (SWRCB) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration (FDA) regulations and California law also establish limits for contaminants in bottled water that provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk.

Contaminants that may be present in source water include:

Microbial Contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or can result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming;

Pesticides and Herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses;

Organic Chemical Contaminants, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production and which can also come from gas stations, urban stormwater runoff, agricultural applications, and septic systems;

Radioactive Contaminants, which can be naturally occurring or can be the result of oil and gas production and mining activities.

More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at (800) 426-4791.



QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Brent Byrne, General Manager, at (661) 943-3170. The Antelope Valley East Kern Water Agency (AVEK) Water Quality Report is also available upon request.

Water Main Flushing

Distribution mains (pipes) convey water to homes, businesses, and hydrants in your neighborhood. The water entering distribution mains is of very high quality; however, water quality can deteriorate in areas of the distribution mains over time. Water main flushing is the process of cleaning the interior of water distribution mains by sending a rapid flow of water through them.

Flushing maintains water quality in several ways. For example, flushing removes sediments like iron and manganese. Although iron and manganese do not pose health concerns, they can affect the taste, clarity, and color of the water. Additionally, sediments can shield microorganisms from the disinfecting power of chlorine, contributing to the growth of microorganisms within distribution mains. Flushing helps remove stale water and ensures the presence of fresh water with sufficient dissolved oxygen and disinfectant levels and an acceptable taste and smell.

During flushing operations in your neighborhood, some short-term deterioration of water quality, though uncommon, is possible. You should avoid tap water for household uses at that time. If you do use the tap, allow your cold water to run for a few minutes at full velocity before use and avoid using hot water to prevent sediment accumulation in your hot water tank. Please contact us if you have any questions or if you would like more information on our water main flushing schedule.

To the Last Drop

The National Oceanic and Atmospheric Administration (NOAA) defines drought as a deficiency in precipitation over an extended period of time, usually a season or more, resulting in a water shortage causing adverse impacts on vegetation, animals, and people. Drought strikes in virtually all climate zones, from very wet to very dry.

There are primarily three types of drought: Meteorological Drought refers to the lack of precipitation or the degree of dryness and the duration of the dry period; Agricultural Drought refers to the agricultural impact of drought, focusing on precipitation shortages, soil water deficits, and reduced groundwater or reservoir levels needed for irrigation; and Hydrological Drought pertains to drought that usually occurs following periods of extended precipitation shortfalls that can impact water supply (i.e., stream flow, reservoir and lake levels, groundwater).

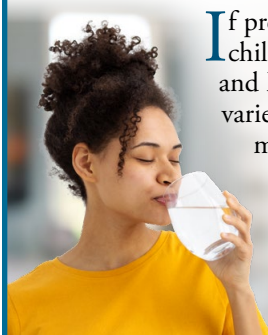
Drought is a temporary aberration from normal climatic conditions, and it can vary significantly from one region to another. Although normally occurring, human factors such as water demand can exacerbate the duration and impact that drought has on a region. By following simple water conservation measures, you can help significantly reduce the lasting effects of extended drought.

Safeguard Your Drinking Water

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- Pick up after your pets.
- If you have your own septic system, properly maintain it to reduce leaching to water sources, or consider connecting to a public water system.
- Dispose of chemicals properly; take used motor oil to a recycling center.
- Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use U.S. EPA's Adopt Your Watershed to locate groups in your community.
- Organize a storm drain stenciling project with others in your neighborhood. Stencil a message next to the street drain reminding people "Dump No Waste – Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Lead in Home Plumbing



If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. We are responsible for providing high-quality drinking water, but we cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. (If you do so, you may wish to collect the flushed water and reuse it for another beneficial purpose, such as watering plants.) If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at (800) 426-4791 or www.epa.gov/safewater/lead.



Fixtures with Green Stains

A green or blue-green stain on kitchen or bathroom fixtures is caused by tiny amounts of copper that dissolve in your home's copper plumbing system when the water sits unused overnight. Copper staining may be the result of a leaky faucet or a faulty toilet flush valve, so be sure your plumbing is in good working order.

Copper stains may also be caused by overly hot tap water. Generally speaking, you should maintain your water temperature at a maximum of 120 degrees Fahrenheit. You should consult the owner's manual for your heater or check with your plumber to determine your current heat setting. Lowering your water temperature will reduce the staining problem and save you money on your energy bill.

Also keep in mind that a tap that is used often throughout the day usually will not produce copper stains, so if you flush the tap for a minute or so before using the water for cooking or drinking, copper levels will be reduced.

Count On Us

Delivering high-quality drinking water to our customers involves far more than just pushing water through pipes. Water treatment is a complex, time-consuming process. Because tap water is highly regulated by state and federal laws, water treatment plant and system operators must be licensed and are required to commit to long-term, on-the-job training before becoming fully qualified. Our licensed water professionals have a basic understanding of a wide range of subjects, including mathematics, biology, chemistry, and physics. Some of the tasks they complete on a regular basis include:

- Operating and maintaining equipment to purify and clarify water.
- Monitoring and inspecting machinery, meters, gauges, and operating conditions.
- Conducting tests and inspections on water and evaluating the results.
- Maintaining optimal water chemistry.
- Applying data to formulas that determine treatment requirements, flow levels, and concentration levels.
- Documenting and reporting test results and system operations to regulatory agencies.
- Serving our community through customer support, education, and outreach.

So the next time you turn on your faucet, think of the skilled professionals who stand behind each drop.

Variances and Exemptions

Variances and exemptions are departmental permission to exceed a maximum contaminant level (MCL) or not comply with a treatment technique under certain conditions. Each year, in accordance with state regulations and requirements, we evaluate which constituents have never been detected in our area and apply for an exemption on those test requirements. SWRCB carefully evaluates the data and approves which items we do not have to test for during that testing period. Exemptions are issued on certain constituents when they have a long history of non-detection during required testing. If you are interested in a full list of contaminants that we sample for, including those that were not detected, you may contact our office.

What type of container is best for storing water?

Consumer Reports has consistently advised that glass or bisphenol A (BPA)-free plastics such as polyethylene are the safest choices. To be on the safe side, do not use any container with markings on the recycle symbol showing 7PC (that's code for BPA). You could also consider using stainless steel or aluminum with BPA-free liners.

How much emergency water should I keep?

Typically, one gallon per person per day is recommended. For a family of four, that would be 12 gallons for three days. Humans can survive without food for one month but can only survive one week without water.

How long can I store drinking water?

The disinfectant in drinking water will eventually dissipate, even in a closed container. If that container housed bacteria prior to filling up with the tap water, the bacteria may continue to grow once the disinfectant has dissipated. Some experts believe that water can be stored up to six months before needing to be replaced. Refrigeration will help slow the bacterial growth.

How long does it take a water supplier to produce one glass of treated drinking water?

It can take up to 45 minutes to produce a single glass of drinking water.

How many community water systems are there in the U.S.?

About 53,000 public water systems across the United States process 34 billion gallons of water per day for home and commercial use. Eighty-five percent of the population is served by these systems.

Which household activity wastes the most water?

Most people would say the majority of water use comes from showering or washing dishes; however, toilet flushing is by far the largest single use of water in a home (accounting for 40 percent of total water use). Toilets use about 4 to 6 gallons per flush, so consider an ultra-low-flow (ULF) toilet, which requires only 1.5 gallons.

BY THE NUMBERS



5.1
TRILLION

The dollar value needed to keep water, wastewater, and stormwater systems in good repair.



12
THOUSAND

The average amount in gallons of water used to produce one megawatt-hour of electricity.



2

How often in minutes a water main breaks.



47.5
TRILLION

The amount in gallons of water used to meet U.S. electric power needs in 2020.



1.7
TRILLION

The gallons of drinking water lost each year to faulty, aging, or leaky pipes.



33

The percentage of water sector employees who will be eligible to retire in 2033.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.

Think before You Flush!

Flushing unused or expired medicines can be harmful to your drinking water. Properly disposing of unused or expired medication helps protect you and the environment. Keep medications out of our waterways by disposing responsibly. To find a convenient drop-off location near you, please visit <https://bit.ly/3leRyXy>.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Regulatory Action Level): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

MCL (Maximum Contaminant Level): The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCLs (SMCLs) are set to protect the odor, taste, and appearance of drinking water.

MCLG (Maximum Contaminant Level Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. EPA.

MRDL (Maximum Residual Disinfectant Level): The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal): The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

NA: Not applicable.

ND (Not detected): Indicates that the substance was not found by laboratory analysis.

NS: No standard.

pCi/L (picocuries per liter): A measure of radioactivity.

PDWS (Primary Drinking Water Standard): MCLs and MRDLs for contaminants that affect health, along with their monitoring and reporting requirements and water treatment requirements.

PHG (Public Health Goal): The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California EPA.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TON (Threshold Odor Number): A measure of odor in water.

µS/cm (microsiemens per centimeter): A unit expressing the amount of electrical conductivity of a solution.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule, and the water we deliver must meet specific health standards. Here, we only show those substances that were detected in our water (a complete list of all our analytical results is available upon request). Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	PHG (MCLG) [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2023	10	0.004	1.95	ND–13.4	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chlorine (ppm)	2023	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.71	0.22–1.39	No	Drinking water disinfectant added for treatment
Chromium, Total (ppb)	2023	50	(100)	4	ND–12	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2023	2.0	1	0.45	0.39–0.54	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
HAA5 [sum of 5 haloacetic acids]–Stage 1 (ppb)	2012	60	NA	5.5	ND–17.4	No	By-product of drinking water disinfection
HAA5 [sum of 5 haloacetic acids]–Stage 2 (ppb)	2023	60	NA	18.43	5.3–29.3	No	By-product of drinking water disinfection
Hexavalent Chromium (ppb)	2016	NS ¹	0.02	11.3	7.6–15	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate [as nitrogen] (ppm)	2023	10	10	4.7	0.78–8.7	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium 228 (pCi/L)	2023	5	0.019	1.28	0.25–2.34	No	Erosion of natural deposits
TTHMs [total trihalomethanes]–Stage 1 (ppb)	2012	80	NA	23.6	ND–76.7	No	By-product of drinking water disinfection
TTHMs [total trihalomethanes]–Stage 2 (ppb)	2023	80	NA	51.6	18–97.1	No	By-product of drinking water disinfection

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	PHG (MCLG)	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2022	1.3	0.3	0.25	0/30	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2019	15	0.2	ND	0/32	No	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits

SECONDARY SUBSTANCES							
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL	PHG (MCLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Chloride (ppm)	2023	500	NS	59	25–100	No	Runoff/leaching from natural deposits; seawater influence
Odor, Threshold (TON)	2023	3	NS	1	1–1	No	Naturally occurring organic materials
Specific Conductance (µS/cm)	2023	1,600	NS	630	450–910	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2023	500	NS	61	38–94	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2023	1,000	NS	377	270–540	No	Runoff/leaching from natural deposits

UNREGULATED SUBSTANCES ²				
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH	TYPICAL SOURCE
Chromium VI [hexavalent chromium] (ppb)	2023	8.7	1.9–13	NA
Sodium (ppm)	2023	79	69–94	NA
Vanadium (ppb)	2023	15	8.2–20	NA

¹There is currently no MCL for hexavalent chromium. The previous MCL of 0.010 ppm was withdrawn on September 11, 2017.

²Unregulated contaminant monitoring helps U.S. EPA and the SWRCB to determine where certain contaminants occur and whether the contaminants need to be regulated.