



ANNUAL
**WATER
QUALITY
REPORT**

WATER TESTING PERFORMED IN 2014



Presented By



Our Mission Continues

We are proud to present once again our annual water quality report covering all testing performed between January 1 and December 31, 2014. Most notably, last year marked the 60th anniversary of Quartz Hill Water District and also the 40th anniversary of the Safe Drinking Water Act (SDWA). This rule was created to protect public health by regulating the nation's drinking water supply. We celebrate these milestones as we continue to manage our water system with a mission to deliver the best-quality drinking water. By striving to meet the requirements of SDWA, we are ensuring a future of healthy, clean drinking water for years to come.

Please let us know if you ever have any questions or concerns about your water.

Community Participation

We welcome input from our rate payers. The Board of Directors meets in our Board Room on the third Thursday of each month at 7:00 p.m. The public is always welcome to attend Board Meetings.

Important Health Information

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those 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. EPA/CDC (Centers for Disease Control and Prevention) 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>.



From the General Manager

This year Quartz Hill Water District is facing an abnormally dry year, as denoted by Governor Brown's Drought State of Emergency address on January 17, 2014. Quartz Hill Water District has taken several proactive steps for just such an emergency. One of these proactive steps is to purchase surplus surface water when available so as to preserve the Antelope Valley basin's precious ground water for such an emergency. Another proactive step the District has implemented was to purchase surplus water during wet years and store it in the Antelope Valley East Kern Water Bank; this is an area where water is spread on the ground so it can percolate to the aquifer and be stored and recovered at a future date.

Quartz Hill Water District continues to rely on two sources of water to supply all of our customers. The first source comes from the Antelope Valley Ground Water Basin and is commonly referred to as ground water. In 2014, 40 percent of the total amount of water used by Quartz Hill Water District came from wells owned by the District. These wells vary in depth from 500 to 600 feet; they are monitored daily to ensure that only the highest quality of water is distributed through our system. The second source of water that supplies the Quartz Hill Water District comes from Antelope Valley East Kern Water Agency's Quartz Hill Treatment Plant. This source provides 60 percent of the total water used during 2014. This water is supplied to the district through two interconnections that are both located south of M-8.

Monthly general physical samples are tested on the distribution system as well as weekly bacteriological samples throughout the system to 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 due to no detection. All water quality analyses were conducted by a state-certified laboratory in compliance with California Department of Public Health Drinking Water Standards.

Respectfully,
Chad J. Reed
General Manager

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. Environmental Protection Agency (U.S. EPA) and the State Water Resources Control Board (State Board) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. State Board regulations also establish limits for contaminants in bottled water that must 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, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;

Inorganic Contaminants, such as salts and metals, that 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, that 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, that 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.

Water Conservation

This year brought us the greatest challenges yet, and we expect 2015 to be even more challenging. With the institution of a limited watering schedule and other state-mandated restrictions, our partnership with our customers has become even more critical.

We are eager to address any concerns and questions you have about meeting the new mandatory restrictions. It is not hard to conserve water. We offer a few basic suggestions here:

- Be conscious of the amount of water your household is using and look for ways to use less whenever you can.
- Dishwashers use 15 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.



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 2 minutes before using water for drinking or cooking. 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 or at www.epa.gov/safewater/lead.

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 the mains.

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 such times. 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.

Benefits of Chlorination

Disinfection, a chemical process used to control disease-causing microorganisms by killing or inactivating them, is unquestionably the most important step in drinking water treatment. By far the most common method of disinfection in North America is chlorination.

Before communities began routinely treating drinking water with chlorine (starting with Chicago and Jersey City in 1908), cholera, typhoid fever, dysentery, and hepatitis A killed thousands of U.S. residents annually. Drinking water chlorination and filtration have helped to virtually eliminate these diseases in the U.S. Significant strides in public health are directly linked to the adoption of drinking water chlorination. In fact, the filtration of drinking water plus the use of chlorine is probably the most significant public health advancement in human history.

How chlorination works:

- Potent Germicide Reduction in the level of many disease-causing microorganisms in drinking water to almost immeasurable levels.
- Taste and Odor Reduction of many disagreeable tastes and odors like foul-smelling algae secretions, sulfides, and odors from decaying vegetation.
- Biological Growth Elimination of slime bacteria, molds, and algae that commonly grow in water supply reservoirs, on the walls of water mains, and in storage tanks.
- Chemical Removal of hydrogen sulfide (which has a rotten egg odor), ammonia, and other nitrogenous compounds that have unpleasant tastes and hinder disinfection. It also helps to remove iron and manganese from raw water.



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

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

Monitoring Requirements Not Met for Quartz Hill Water District

Our water system failed to monitor as required for drinking water standards during the past year and, therefore, was in violation of the regulations. Even though this failure was not an emergency, as our customers, you have a right to know what you should do, what happened, and what we did to correct this situation.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During 2014, we did not monitor or test for Hexavalent Chromium at all sources and therefore, cannot be sure of the quality of our drinking water during that time.

What should I do?

- There is nothing you need to do at this time.
- The table below lists the contaminant(s) we did not properly test for during the last year, how many samples we are required to take and how often, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

Contaminant	Required Sampling Frequency	Number of Samples Taken	When All Samples Should Have Been Taken	When Samples Were or Will Be Taken
Hexavalent Chromium	1 initial test prior to January 2015	None	Between 7-1-14 and 12-31-14	Taken 1-27-15

- If you have health issues concerning the consumption of this water, you may wish to consult your doctor.

What happened? What is being done?

- We were unaware of the requirement change but have since taken the required samples, as described in the last column of the table above. For more information, please contact Debi Pizzo at 661-943-3170 or at the District office, 5034 West Avenue L, Quartz Hill, CA 93536

Secondary Notification Requirements

Upon receipt of notification from a person operating a public water system, the following notification must be given within 10 days [Health and Safety Code Section 116450(g)]:

- SCHOOLS: Must notify school employees, students, and parents (if the students are minors).
- RESIDENTIAL RENTAL PROPERTY OWNERS OR MANAGERS (including nursing homes and care facilities): Must notify tenants.
- BUSINESS PROPERTY OWNERS, MANAGERS, OR OPERATORS: Must notify employees of businesses located on the property.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this public notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by Quartz Hill Water District. State Water System ID#: 1910130

Date distributed: June 1, 2015

Sampling Results

During the past year, we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic, or synthetic organic contaminants. The tables below show only those contaminants that were detected in the water. The state requires us to monitor for certain substances less often 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.

We participated in the 3rd stage of the EPA's Unregulated Contaminant Monitoring Regulation (UCMR3) program by performing additional tests on our drinking water. UCMR3 benefits the environment and public health by providing the EPA with data on the occurrence of contaminants suspected to be in drinking water, in order to determine if the EPA needs to introduce new regulatory standards to improve drinking water quality.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL (MRDL)	PHG (MCLG) (MRDLG)	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2014	10	0.004	5.82	2.5-10	No	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Chlorine (ppm)	2014	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.76	0.52-0.93	No	Drinking water disinfectant added for treatment
Chromium (ppb)	2014	50	(100)	3.9	0-11	No	Discharge from steel and pulp mills and chrome plating; erosion of natural deposits
Fluoride (ppm)	2014	2.0	1	0.62	0.34-0.83	No	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Gross Alpha Particle Activity (pCi/L)	2014	15	(0)	9.24	5.08-12.94	No	Erosion of natural deposits
Haloacetic Acids (HAAs)-Stage 2 (ppb)	2014	60	NA	10.58	9.3-12.1	No	By-product of drinking water disinfection
Hexavalent Chromium (ppb)	2014	10	0.02	4.41	0.31-11	No	Discharge from electroplating factories, leather tanneries, wood preservation, chemical synthesis, refractory production, and textile manufacturing facilities; erosion of natural deposits
Nitrate [as nitrate] (ppm)	2014	45	45	22.5	5.8-39	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Nitrate + Nitrite [as N] (ppb)	2014	10	10	3600	1300-8600	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium 226 (pCi/L)	2014	5	0.05	0.12	0-0.253	No	Erosion of natural deposits
Radium 228 (pCi/L)	2014	5	0.019	0.05	0-0.214	No	Erosion of natural deposits
TTHMs (Total Trihalomethanes)-Stage 2 (ppb)	2014	80	NA	23.53	17.9-82.6	No	By-product of drinking water disinfection
Turbidity (NTU)	2014	TT	NA	0.54	0-0.54	No	Soil runoff
Uranium (pCi/L)	2014	20	0.43	3.4	0-7.3	No	Erosion of natural deposits

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%TILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2013	1.3	0.3	0.37	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Lead (ppb)	2013	15	0.2	5.6	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)	2014	500	NS	50.8	24-97	No	Runoff/leaching from natural deposits; seawater influence
Corrosivity (units)	2014	Noncorrosive	NS	11.9	11.9-11.9	No	Natural or industrially influenced balance of hydrogen, carbon, and oxygen in the water, affected by temperature and other factors
Odor-Threshold (TON)	2014	3	NS	1	1-1	No	Naturally occurring organic materials
Specific Conductance (μ S/cm)	2014	1,600	NS	572.8	430-840	No	Substances that form ions when in water; seawater influence
Sulfate (ppm)	2014	500	NS	28.6	0-55	No	Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (ppm)	2014	1,000	NS	372.6	260-510	No	Runoff/leaching from natural deposits

UNREGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH
Boron (ppb)	2014	132.5	110-170
Sodium (ppm)	2014	72.5	63-84
Vanadium (ppb)	2014	17.25	11-25

While your drinking water meets the federal and state standard for arsenic, it does contain low levels of arsenic. The arsenic standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The U.S. EPA continues to research the health effects of low levels of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

Definitions

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

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

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

NS: No standard

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

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.

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.