

Presented By
Quartz Hill Water District



Reporting Year 2012

WATER QUALITY REPORT

There When You Need Us

We are once again proud to present our annual water quality report covering all testing performed between January 1 and December 31, 2012. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available to assist you should you ever have any questions or concerns about your water.

From The General Manager

Quartz Hill Water District has historically relied upon 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 2012, 27 percent of the total amount of water used by the District came from the district-owned wells. These 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. 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 73 percent of the total water used during 2012. 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 for but not reported due to no detection. All water-quality analyses were conducted by a state-certified laboratory in compliance with state California Department of Public Health Drinking Water Standards.

Respectfully,
Chad J. Reed
General Manager

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.

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. 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>.

Community Participation

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

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Chad Reed, General Manager, at (661) 943-3170. The Antelope Valley East Kern Water Agency (AVEK) 2012 Water Quality Report is available on request.

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 California Department of Public Health (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department 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.

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

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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.

REGULATED SUBSTANCES										
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL] (MCLG)	PHG AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE				
Barium (ppm)	2010	1	2	ND-0.11	No	Discharges of oil drilling wastes and from metal refineries; erosion of natural deposits				
Chlorine (ppm)	2012	[4.0 (as Cl ₂)]	[4 (as Cl ₂)]	0.31-1.01	No	Drinking water disinfectant added for treatment				
Fluoride (ppb)	2012	2.0	1	ND-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)	2011	15	(0)	ND-7.7	No	Erosion of natural deposits				
Halocetic Acids [HAAs] (ppb)	2012	60	NA	ND-19.4	No	By-product of drinking water disinfection				
Nitrate [as nitrate] (ppm)	2012	45	45	2.9-42	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewages; erosion of natural deposits				
Nitrite [as nitrogen] (ppm)	2011	1	1	ND-11.9	No	Runoff and leaching from fertilizer use; leaching from septic tanks and sewages; erosion of natural deposits				
TTHMs [Total Trihalomethanes] (ppb)	2012	80	NA	ND-95.4	No	By-product of drinking water disinfection				
UNREGULATED SUBSTANCES										
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	SMCL (MCLG)	PHG AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE				
Copper (ppm)	2010	1.3	0.3	0/32	No	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives				
Lead (ppb)	2010	15	0.2	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 (MCLG)	PHG AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE				
Chloride (ppm)	2012	500	NS	45.5	25-100	No	Runoff and leaching from natural deposits; seawater influence			
Manganese (ppb)	2012	50	NS	11.6	ND-49	No	Leaching from natural deposits			
Odor-Threshold (TON)	2012	3	NS	1	1-1	No	Naturally occurring organic materials			
Sulfate (ppm)	2012	500	NS	56.5	37-165	No	Runoff and leaching from natural deposits; industrial wastes			
Total Dissolved Solids (ppm)	2012	1,000	NS	348.4	290-500	No	Runoff and leaching from natural deposits			
Turbidity (NTU)	2012	5	NS	0.1	ND-0.1	No	Soil runoff			
Zinc (ppm)	2011	5.0	NS	0.0187	ND-0.056	No	Runoff and leaching from natural deposits; industrial wastes			
UNREGULATED SUBSTANCES										
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AMOUNT DETECTED	RANGE LOW-HIGH							
Boron (ppb)	2012	88.4	ND-110							
Sodium (ppm)	2012	62.7	61-77							
Vanadium (ppb)	2012	18	10-24							

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

What is the typical per-day water usage?

While usage varies from community to community and person to person, on average, Americans use 183 gallons of water a day for cooking, washing, flushing, and watering purposes. The average family turns on the tap between 70 and 100 times daily. About 74% of home water usage occurs in the bathroom, about 21% in the laundry room, and about 5% in the kitchen.

Why do water pipes tend to break in winter?

Liquids generally contract when frozen and become more dense; however, the unique qualities of water cause it to expand by up to 9% when it freezes. That is why water pipes burst when temperatures reach the freezing mark. The average American consumes 1,500 pounds of food each year. 1,000 gallons of water are required to grow and process each pound of that food. Thus, 1.5 million gallons of water is invested in the food eaten annually by just one person! This 200,000-plus cubic feet of water per person is enough to cover a football field four feet deep.

How much water is used to create the food we eat each year?

No, ALWAYS use cold water. Hot water is more likely to contain rust, copper, and lead from household plumbing and water heaters. These harmful substances can dissolve into hot water faster than they do into cold water, especially when the faucet has not been used for an extended period of time. Is it okay to use hot water from the tap for cooking and drinking? Consumer Reports has consistently advised that glass or 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 7 PC (which is the code for BPA). You could also consider using stainless steel or aluminum containers that have BPA-free liners.

How much water is used in the shower?

A 10-minute shower can take 25 to 50 gallons of water. High-flow shower heads allow a flow of 6 to 10 gallons a minute. Low-flow shower heads can cut the rate in half without reducing pressure.

Definitions

AL (Regulatory Action Level): The concentration of a contaminant that, 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 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.

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 (pico-curie 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.

Water treatment began as a way to remove disease-causing agents. (Fiction: It was only in the 1950s that scientists began to suspect that water might carry diseases. Although earlier treatment of water could make the water safer, it was mainly done merely to improve the taste, smell, or appearance of the water.)

About half of the world's water supply is available for drinking. (Fiction: If all the world's water were fit into a gallon jug, the fresh water available for us to use would equal only about one tablespoon.)

Due to its unique nature, water boils at the same temperature anywhere on the planet. (Fiction: At sea level, water boils at 212 degrees Fahrenheit, but on top of Mr. Everest, water boils at 154 degrees.)

Water regulates the temperature of the Earth. (Fact: As in the human body, the water in our oceans, lakes, and streams plays a major role in regulating planetary temperatures.)

The Mississippi River is longer than the Amazon River. (Fiction: At 3,902 miles the Mississippi River is not as long as the Amazon River, which flows for 4,000 miles.)

Forty trillion gallons of water a day are carried in the atmosphere across the United States. (Fact: Forty percent of the atmosphere's moisture content falls as precipitation each day.)

Fact or Fiction

