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QUAIL VALLEY WATER DISTRICT

2017 CONSUMER CONFIDENCE REPORT

Quail Valley Water District-
Water System Name: **Eastside System** Report Date: **June 21, 2018**

We test the drinking water quality for many constituents as required by state and federal regulations. This report shows the results of our monitoring for the period of January 1 - December 31, 2017 and may include earlier monitoring data.

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

Type of water sources in use: Groundwater (wells).

Name & general location of sources: Eastside System water supply consists of Well 1 (Tanganda Well) and Well 2 (Pretoria Well), both located in the Westside System service area.

Drinking Water Source Assessment information: Not available.

Time and place of regularly scheduled board meetings for public participation: Regular meetings of the Board of Directors are held at the District Office (24750 Sand Canyon Road) at 8:30 A.M. on the last Saturday of each month.

For more information, contact: Randy Hardenbrook, General Manager **Phone:** (661) 822-1923

TERMS USED IN THIS REPORT

Maximum Contaminant Level (MCL): 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 are set to protect the odor, taste, and appearance of drinking water.

Maximum Contaminant Level Goal (MCLG): 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. Environmental Protection Agency (U.S. EPA).

Public Health Goal (PHG): The level of a contaminant in drinking water below which there is

Secondary Drinking Water Standards (SDWS): MCLs for contaminants that affect taste, odor, or appearance of the drinking water. Contaminants with SDWSs do not affect the health at the MCL levels.

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

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

Variances and Exemptions: State Board permission to exceed an MCL or not comply with a treatment technique under certain conditions.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and

no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Maximum Residual Disinfectant Level (MRDL): 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.

Maximum Residual Disinfectant Level Goal (MRDLG): 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.

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

determine (if possible) why total coliform bacteria have been found in our water system.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an *E. coli* MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

ND: not detectable at testing limit

ppm: parts per million or milligrams per liter (mg/L)

ppb: parts per billion or micrograms per liter (µg/L)

ppt: parts per trillion or nanograms per liter (ng/L)

ppq: parts per quadrillion or picogram per liter (pg/L)

pCi/L: picocuries per liter (a measure of radiation)

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.

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 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, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, agricultural application, and septic systems.
- *Radioactive contaminants*, that can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the 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 provide the same protection for public health.

Tables 1, 2, 3, 4, 5, and 6 list all of the drinking water contaminants that were detected during the most recent sampling for the constituent. The presence of these contaminants in the water does not necessarily indicate that the water poses a health risk. The State Board allows us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of the data, though representative of the water quality, are more than one year old. Any violation of an AL, MCL, MRDL, or TT is asterisked. Additional information regarding the violation is provided later in this report.

TABLE 1 – SAMPLING RESULTS SHOWING THE DETECTION OF COLIFORM BACTERIA					
Microbiological Contaminants (complete if bacteria detected)	**Highest No. of Detections**	**No. of Months in Violation**	**MCL**	**MCLG**	**Typical Source of Bacteria**
Total Coliform Bacteria (state Total Coliform Rule)	(In a mo.) 0	0	1 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	(In the year) 0	0	A routine sample and a repeat sample are total coliform positive, and one of these is also fecal coliform or *E. coli* positive	0	Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	(In the year) 0	0	(a) 0	0	Human and animal fecal waste
(a) Routine and repeat samples are total coliform-positive and either is *E. coli*-positive or system fails to take repeat samples following *E. coli*-positive routine sample or system fails to analyze total coliform-positive repeat sample for *E. coli*.					

TABLE 2 – SAMPLING RESULTS SHOWING THE DETECTION OF LEAD AND COPPER								
Lead and Copper (complete if lead or copper detected in the last sample set)	**Sample Date**	**No. of Samples Collected**	**90th Percentile Level Detected**	**No. Sites Exceeding AL**	**AL**	**PHG**	**No. of Schools Requesting Lead Sampling**	**Typical Source of Contaminant**
Lead (ppb)		5	ND	0	15	0.2	None	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)		5	ND	0	1.3	0.3	Not applicable	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

In February 2017, the District was cited for failure to conduct initial lead and copper sampling in 2016. The District completed two rounds of initial lead and copper sampling in 2017. The results of the lead and copper sampling are summarized in Table 2.

TANGANDA WELL

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)		230	N/A	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)		2.5	N/A	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Aluminum		0.05	N/A	1 mg/L	0.60 mg/L	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic		**92 ***	71-98	10 µg/L	0.004 µg/L	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride		0.69	N/A	2 mg/L	1 mg/L	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate		**14 ***		10 mg/L	10 mg/L	Runoff and leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits
Radium-228 (pCi/L)	2016-17	0.515	ND-1.63	5 pCi/L	0.019 pCi/L	Erosion of natural deposits

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Iron		280	N/A	300 µg/L		Leaching from natural deposits; industrial wastes
Sulfate		42	N/A	500 mg/L		Runoff/leaching from natural deposits; industrial wastes
Turbidity		1.8	N/A	5 units		Soil runoff

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

PRETORIA WELL

TABLE 3 – SAMPLING RESULTS FOR SODIUM AND HARDNESS

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Sodium (ppm)		190	N/A	none	none	Salt present in the water and is generally naturally occurring
Hardness (ppm)		7.7	N/A	none	none	Sum of polyvalent cations present in the water, generally magnesium and calcium, and are usually naturally occurring

TABLE 4 – DETECTION OF CONTAMINANTS WITH A PRIMARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL [MRDL]**	**PHG (MCLG) [MRDLG]**	**Typical Source of Contaminant**
Aluminum		0.078	N/A	1 mg/L	0.60 mg/L	Erosion of natural deposits; residue from some surface water treatment processes
Arsenic		**82 ***	58-89	10 µg/L	0.004 µg/L	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes
Fluoride		0.3	N/A	2 mg/L	1 mg/L	Erosion of natural deposits; water additive that promotes strong teeth; discharge from fertilizer and aluminum factories
Radium-228 (pCi/L)	2016-17	0.55	ND-1.61	5 pCi/L	0.019 pCi/L	Erosion of natural deposits

TABLE 5 – DETECTION OF CONTAMINANTS WITH A SECONDARY DRINKING WATER STANDARD

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**MCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Iron		**1036 ***	270-1900	300 µg/L		Leaching from natural deposits; industrial wastes
Sulfate		41	N/A	500 mg/L		Runoff/leaching from natural deposits; industrial wastes
Turbidity		2.5	N/A	5 units		Soil runoff

The State allows us to monitor for some contaminants less than once per year because the concentrations of these contaminants do not change frequently. Some of our data, though representative, are more than one year old.

Summary Information for Violation of a MCL, MRDL, AL, TT, or Monitoring and Reporting Requirement

VIOLATION OF A MCL, MRDL, AL, TT, OR MONITORING AND REPORTING REQUIREMENT				
Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**
Arsenic was detected exceeding the drinking water standard MCL of 10 µg/L	Naturally occurring arsenic is present in water from the Tanganda and Pretoria wells exceeding the MCL.	On-going	The District is constructing a grant funded project to combine the Eastside and Westside systems, install an iron and manganese treatment facility, and utilize a water source meeting the drinking water standards. Construction is expected to be complete in 2018.	Some people who drink water containing arsenic in excess of the MCL over many years may experience skin damage or circulatory system problems, and may have an increased risk of getting cancer.
Nitrate was detected exceeding the drinking water standard MCL of 10 mg/L	A routine sample for Nitrate from the Tanganda well was collected on 6/5/17. The sample results indicated that Nitrate levels exceeded the MCL.	5 days	The well was removed from the system on 6/9/17. Subsequent samples confirmed the Nitrate MCL exceedance and the well has been permanently removed from the water system.	Infants below the age of six months who drink water containing nitrate in excess of the MCL may quickly become seriously ill and, if untreated, may die because high nitrate levels can interfere with the capacity of the infant's blood to carry oxygen. Symptoms include shortness of breath and blueness of the skin. High nitrate levels may also affect the oxygen-carrying ability of the blood of pregnant women.
Iron was detected exceeding the drinking water standard MCL of 300 mg/L	A routine sample for Iron was collected from the Pretoria well on 6/5/17. The sample results indicate the iron levels exceed the secondary MCL.	On-going	Quarterly sampling for Iron has been initiated. The annual average of the third and fourth quarter samples confirm the exceedance of the MCL. We anticipate removing the well from service in 2018.	Secondary drinking water standards are in place to establish an acceptable aesthetic quality of the water.

Additional General Information on Drinking Water

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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline (1-800-426-4791).

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised 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 can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. U.S. EPA/Centers for Disease Control (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 (1-800-426-4791).

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. Quail Valley Water District is responsible for providing high quality drinking water, but 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 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 or at http://www.epa.gov/lead.

Nitrate in drinking water at levels above 10 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 10 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

Arsenic Remediation Project Update

Quail Valley Water District and The California State Water Resources Control Board entered into a funding agreement on December 8, 2015 for the purpose of financing a project to enable the District to meet safe drinking water standards. When complete the Eastside and Westside systems will be combined and the District will supply water for the entire system from two wells, the existing Montclaire well and a new well drilled near the existing Montclaire well. Both wells will be treated for iron and manganese after which the water will meet all current water quality standards.

We expect this project to be completed at the end of 2018. As of June, 2018, the pipeline has been installed and placed in service. Water from the Montclaire well is now being supplied to the Eastside and Westside systems. The Umtali well which exceeds standards for Fluoride and Antimony has been placed in stand-by service and it is anticipated that it will only be used in the event of a water shortage. The Tnaganda well which exceeds standards for Arsenic and Nitrate has been permanently removed from the system. The District is currently working with WaterBoards to permanently remove the Pretoria well, which exceeds standards for Arsenic, from the water system. In the interim, the District has disconnected the Pretoria well from the water system.