CITY OF AVENAL

"OASIS IN THE SUN GATEWAY TO THE COAST"

2022 Consumer Confidence Report

Water System Name: **City of Avenal** Report Date: June 09, 2023

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 to December 31, 2022 and may include earlier monitoring data.

Este informe contiene información muy importante sobre su agua para beber. Favor de comunicarse City of Avenal a (559) 386-5766 para asistirlo en español.

Type of water source(s) in use: Surface Water

Name & general location of source(s): The City of Avenal drinking water is pulled out of the California aqueduct. It is located on the Avenal Cutoff Road and the California aqueduct

Drinking Water Source Assessment information: A source water assessment was conducted in April of 2003. The source is considered most vulnerable to the following activities associated with contaminants detected in the water supply: vehicular traffic, recreational activities, influent drainages and storm water runoff.

Time and place of regularly scheduled board meetings for public participation: City council meetings are held at the Avenal Theater on the 2nd and 4th Thursday of each month at 5:15 pm

For more information, contact: Ronald Brumley, Utilities Supervisor Phone: (559) 401-5165

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 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.

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: Permissions from the State Water Resources Control Board (State Board) 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 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 Board prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. The U.S. Food and Drug Administration regulations and California law 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)	1	0	2 positive monthly sample	0	Naturally present in the environment
Fecal Coliform or *E. coli* (state Total Coliform Rule)	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		Human and animal fecal waste
E. coli (federal Revised Total Coliform Rule)	0	0	(a)	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)	7/26/22 thru 7-27-22	31	0	1	15	0.2	0 All schools sampled in 2019	Internal corrosion of household water plumbing systems; discharges from industrial manufacturers; erosion of natural deposits
Copper (ppm)	7-26-22 thru 7-7-22	31	.560	0	1.3	0.3	N/A	Internal corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

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)	10-04-2022	66	66	None	None	Salt present in the water and is generally naturally occurring
Hardness (ppm)	10-04-2022	100	100	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 (ug/L)	10-04-2022	74		1000	600	Erosion of natural deposits; residual from some surface water treatment processes.
Antimony (ug/L)	10-04-2022	0.8		6	1	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder. Some people who drink water containing antimony in excess of the MCL over many years may experience increases in blood cholesterol and decreases in blood sugar
Arsenic (ug/L)	10-04-2022	3		10	0.004	Erosion of natural deposits; runoff from orchards; glass and electronics production wastes. Some people who drink 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.
Gross Alpha (pCi/L)	10-18-17	<3		15	0	Certain minerals are radioactive and may emit forms of radiation known as photons and alpha radiation. Some people who drink water containing alpha and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
Gross Beta (pCi/L)	10-18-17	<4		50		Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer.
TTHMs (Total Trihalomethanes) ug/L	2-22-22 thru 10-11-22	70.7	47-91	80	N/A	Some people who drink water containing TTHMs in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer.
HAA5 (sum of 5 Haloacetic Acids) (ug/L)	2-22-22 Thru 10-11-22	20.4	13-31	60	N/A	Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.

Chloramines (mg/L)	1-4-22 Thru 12-28-22	1.5	0.54-2.83	4.0	4.0	Disinfectant added for treatment; Some people who use water containing chloramines well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chloramines well in excess of the MRDL could experience stomach discomfort or anemia.
Chlorine (mg/L)	1-4-22 Thru 12-28-22	1.95	1.0-3.1	4.0	4.0	Disinfectant added for treatment; Some people who use water containing chlorine well in excess of the MRDL could experience irritating effects to their eyes and nose. Some people who drink water containing chlorine well in excess of the MRDL could experience stomach discomfort.
Chromium(total) (ug/L)	10-04-2022	20		50	(100)	Discharge from steel and pulp mills and chrome plating: erosion of natural deposits
Selenium(ug/L)	10-04-2022	2	2	50		Selenium is an essential nutrient. However, some people who drink selenium in excess of the MCL over many years may experience hair or fingernail losses, numbness in finger or toes or circulation system problems
Total Xylenes(ug/L)	10-04-2022	ND		1,750	1,750	Discharge from petroleum factories and or chemical factories. Drinking water containing Xylenes well in excess of MRDL may cause nervous system damage

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

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**SMCL**	**PHG (MCLG)**	**Typical Source of Contaminant**
Aluminum (ug/L)	10-04-2022	74		200		Erosion of natural deposits; residual from some surface water treatment processes.
Color (units)	10-04-2022	5		15		Natural occurring organic materials
Foaming Agents ug/L	10-04-2022	ND		500		Municipal and industrial waste discharges
Manganese(mg/L)	10-04-2022	ND		500		Leaching from natural deposits
Odor—Threshold (TON)	10-04-2022	1		3		Naturally occurring organic materials
Turbidity (units)	10-04-2022	0.24		0.3		Soil runoff
Zinc (ug/L)	10-04-2022	200		5000		Runoff/leaching from natural deposits; industrial wastes
Total Dissolved Solids (mg/L)	10-04-2022	340		500		Runoff/leaching from natural deposits
Specific Conductance (uS/cm)	10-04-2022	630		1600		Substances that form ions when in water; seawater influence
Chloride (mg/L)	10-04-2022	110		250		Runoff/leaching from natural deposits; seawater influence
Sulfate (mg/L)	10-04-2022	58		500		Runoff/leaching from natural deposits; industrial wastes
PH (Std Units)	10-04-2022	7.8		6.5-8.5		

TABLE 6 – DETECTION OF UNREGULATED CONTAMINANTS

Chemical or Constituent (and reporting units)	**Sample Date**	**Level Detected**	**Range of Detections**	**Notification Level**	
Molybdenum(ug/L)	2-10-14to1-15-15	2.3	1.8-2.7	N/A	
Strontium (ug/L)	2-10-14to1-15-15	295	275-345	1500	
Vanadium(ug/L)	2-10-14to1-15-15	2.8	2.2-3.4	15	
Hexavalent Chromium (ug/L)	10-04-2022	ND		50	
Chlorate (ug/L)	2-10-14to1-15-15	398	210-660	800	
HAA9 (ug/L)	5-7-19 to 11-5-19	35.34	25.17-49.2		
Potassium (mg/L)	10-04-2022	3.7		N/A	
Calcium	10-04-2022	21			
Magnesium (mg/L)	10-04-2022	13			

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).

Lead-Specific Language: 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.

The City of Avenal 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 (1-800-426-4791) or at http://www.epa.gov/lead.

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**
DBP-TTHM	Poor raw water quality has made it difficult for the current treatment technology at the water treatment plant to meet the state standard.	With the January and April 2023 test results, all sample sites now comply with the TTHM MCL	In progress, the City of Avenal has contracted with Provist and Prichard Engineering to develop a plan to solve the TTHM issues.	Some people who drink water containing TTHMs in excess of the MCL over many years may experience liver, kidney, or central nervous system problems, and may have an increased risk of getting cancer

For Systems Providing Surface Water as a Source of Drinking Water

TABLE 8 - SAMPLING RESULTS SHOWING TREATMENT OF SURFACE WATER SOURCES	
Treatment Technique [a] (Type of approved filtration technology used)	Conventional Filtration
Turbidity Performance Standards [b] (that must be met through the water treatment process)	Turbidity of the filtered water must: 1 – Be less than or equal to 0.3 NTU in 95% of measurements in a month. 2 – Not exceed 0.3 NTU for more than eight consecutive hours. 3 – Not exceed 1.0 NTU at any time.
Lowest monthly percentage of samples that met Turbidity Performance Standard No. 1.	98.4%
Highest single turbidity measurement during the year	0.410
Number of violations of any surface water treatment requirements	0

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

(b) Turbidity (measured in NTU) is a measurement of the cloudiness of water and is a good indicator of water quality and filtration performance. Turbidity results which meet performance standards are considered to be in compliance with filtration requirements.

Summary Information for Violation of a Surface Water TT

VIOLATION OF A SURFACE WATER TT				
TT Violation	**Explanation**	**Duration**	**Actions Taken to Correct the Violation**	**Health Effects Language**

Summary Information for Operating Under a Variance or Exemption

Summary Information for Federal Revised Total Coliform Rule

Level 1 and Level 2 Assessment Requirements

Level 1 or Level 2 Assessment Requirement not Due to an *E. coli* MCL Violation

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During 2022 we were required to conduct 0 Level 1 assessments. 0 Level 1 assessments were completed. In addition, we were required to take 0 corrective actions and we completed 0 of these actions. During 2022, 0 Level 2 assessments were required to be completed for our water system. 0 Level 2 assessments were completed. In addition, we were required to take 0 corrective actions and we completed 0 of these actions.