



SELECT CAMP VERDE

THE CENTER OF IT ALL — ARIZONA

TOWN OF CAMP VERDE Water Quality Report: Reporting Year 2022

WATER TREATMENT

All water produced for distribution undergoes a level of treatment. The Town of Camp Verde (Town) draws the majority of its water from the Mongini Well fields located at the far northwestern area of Town, along the Prescott National Forest Boundary. The only current treatment needed at the Mongini site is chlorine treatment for disinfection to prevent the development of bacterial contamination that could occur in the water storage and distribution system.

The Town owns one additional well in the Verde River Estates Subdivision that utilizes chlorine treatment and arsenic removal utilizing a titanium treatment vessel, which maintains arsenic levels well below the federal action level standards.

WATER SAMPLING

The Town monitors and samples for over 100 substances and physical characteristics on a regular basis. The Town samples for coliform bacteria five (5) times per month at the Mongini site and one (1) time per month at Verde River Estates. The total coliform bacteria test is a primary indicator of the suitability for consumption of drinking water, which measures the concentration of total coliform associated with the possible presence of disease-causing organisms.

The Town also pulls monthly samples for arsenic at each well and the point of compliance at Mongini and Verde River Estates. The Town reports sampling to ADEQ on a quarterly basis. Currently the Town has treatment for arsenic at Verde River Estates and no current treatment at the Mongini site. At Mongini, during higher production (summertime), the arsenic levels rise but are currently below Federal and State regulatory limits. The Town is currently designing an arsenic treatment system for the Mongini site due to the rising trends in arsenic. Arsenic can enter the water supply from natural deposits in the earth. Here in the southwest, the source is the volcanic and granite rocks that groundwater moves through.

SOURCE OF WATER

Ground water is the sole source of potable water in the Town. The Town produces its water from three production wells within the Verde limestone formation below the northeast slope of Mingus Mountain. Two wells are pumped at the Mongini Well and Water Treatment Site at the northwestern area of the Town, along the Prescott National Forest boundary. The majority of the Town's over 2,000 services are supplied from water from the Mongini wells. The Town also operates a well located in the Verde River Estates Subdivision which services approximately 50 customers.

The Town's average annual daily consumption demand is 0.62 MGD, with a maximum daily consumption of 0.84 MGD. In 2022, the Town produced (pumped) 778 acre-feet at Mongini Well Site and 14 acre-feet at Verde River Estates.

NOTE FROM WATER OPERATOR, RICK TACKITT

As your water provider, the Town serves more than water. We provide customer service, reliability, peace of mind and the protection of public health. Our job is to ensure that your safe supply of water keeps flowing not only today, but well into the future. It's all part of our service commitment to you and everyone in our community. The Water Quality Report is a comprehensive report issued by the Town of Camp Verde Water Division. The annual report identifies the source of Camp Verde's drinking water, provides water quality information, and summarizes analytical tests of the Town's drinking water supply for Calendar Year 2022. In order to ensure that tap water is safe to drink, the EPA prescribes regulations that limit the number of certain contaminants in water pervaded by public water systems. In 2022, water from the Town system met all applicable federal and state drinking water health standards.

APPLICABLE FEDERAL AND STATE REQUIREMENTS

The EPA and the ADEQ require providers of drinking water to annually report the quality of water they deliver. The Town safeguards its water supplies and once again is pleased to report compliance with prescribed maximum contaminant levels and other water quality standards. The Town regularly conducts testing beyond the minimum regulatory requirements to further assure the safety of its drinking water.

NATURALLY OCCURRING CONTAMINANTS

A contaminant is any physical, chemical, biological, or radiological substance or matter in the water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these contaminants are not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and others may even have nutritional value at low levels.

SOURCE WATER ASSESSMENT

Based on the information currently available on the hydrogeological settings and the adjacent land uses that are in proximity of the water sources for the Town's public water system, the ADEQ has given the Town a low-risk designation for the degree to which the drinking water sources are protected. A low-risk designation indicates that most source water protection measures are either already implemented or the hydrogeology is such that additional measures will have little impact on protection.

WHERE TO LEARN MORE ABOUT YOUR DRINKING WATER:

Town of Camp Verde Water Division

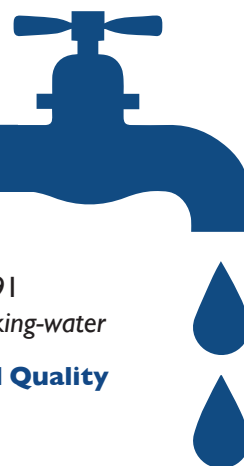
395 S Main Street
Camp Verde, AZ 86322
(928) 554-0850
Email: utilities@campverde.az.gov

Environmental Protection Agency

Safe Drinking Water Hotline: (800) 426-4791
Website: www.epa.gov/ground-water-and-drinking-water

Arizona Department of Environmental Quality

(800) 234-5677
Website: www.azdeq.gov/environ/water



FREQUENTLY ASKED QUESTIONS AND TOPICS

GENERAL WATER CONSUMPTION

Statistics show that U.S. consumers average between 100 and 160 gallons, per person, per day, for all uses. Usage can vary greatly based on an individual's particular habits. Between two quarts and one gallon are consumed for cooking, drinking water and prepared beverages such as coffee and tea. The remainder includes household cleaning, bathing, laundry, outdoor watering and more. Most new, low-use toilets use about 1.5 gallons per flush, compared to older ones using about four gallons per flush. Showers can use anywhere from two to five gallons per minute and a bath can consume 35+ gallons per use depending on tub size. Outdoor usage generally accounts for the largest volume of water consumed especially during spring and summer months.

WATER HARDNESS

Hardness in drinking water is caused by calcium and magnesium, which are two non-toxic, naturally occurring minerals in water. They enter water mainly through erosion and weathering of rocks. The more these two minerals are in water, the harder the water. Water hardness is usually expressed in parts per million (ppm) or grains per gallon of dissolved calcium and magnesium carbonate. The Town's water is considered moderately hard, averaging 75 to 130 ppm, which equivalates 4.3 to 7.6 grains per gallon. In hard water, lathering of soap for washing is more difficult to do and cleaning becomes less efficient. As a result, more soap or detergent is needed to get things clean, be it your hands, hair or your laundry. Dull hair, spots on dishes, glasses, faucets and film on shower doors can be related to water that is considered hard in nature.

WATER HARDNESS SCALE

Grains/Gal	mg/L & ppm	Classification
Less than 1	Less than 17.1	Soft
1 - 3.5	17.1 - 60	Slightly Hard
3.5 - 7	60 - 120	Moderately Hard
7 - 10	120 - 180	Hard
over 10	over 180	Very Hard

WATER PRESSURE

The most common question regarding water is about a change in water pressure to the house. Low water pressure to the home can be caused by many things: Mineral deposit build-up can reduce the flow in domestic pipes and faucet aerators may become plugged if not regularly cleaned and maintained. Another common cause of water pressure concerns can be related to the setting of a water pressure regulator valve (PRV). A PRV factory setting is 50 PSI. A previous homeowner may have adjusted the PRV setting to limit the pressure of water delivered from the municipal supply line. A failing PRV can cause low or high water pressure. It is important to understand that a PRV is a mechanical device that can fail over time or, on occasion, be defective directly from the manufacturer. A properly installed PRV ensures the pressure coming from the municipal supply line is reduced to an acceptable pressure.

SHUT-OFF VALVE

Do you have a water leak and need to turn off water to your house? Do you know if you have a customer shut-off valve and where it might be located? The Town water meter is generally located near the street, at grade level, in a rectangular concrete box with a metal lid. Customer shut-off valves are usually located behind the Town's meter box in a separate concrete/plastic box or PVC pipe/tube as shown below in Fig. 1 and 2. Typical versions of what may be within the Town's meter box

and customer box is shown below in Fig. 3. Homeowners/ customers should always utilize the customer shut-off valve located in the customer box or tube to shut-off water for the service. Alternate locations where a customer shut-off valve may be located are: in a box in close proximity to the home, in a crawl space where the service enters the building, in a water closet or by the water heater. When a customer valve is not available, always contact Water Division to shut off water at the Town meter by calling (928) 554-0850.

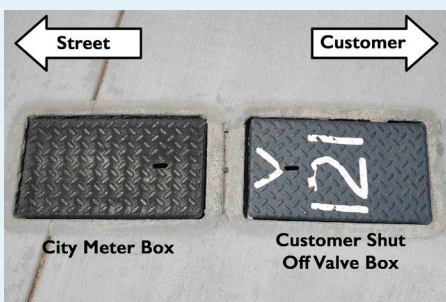


Fig. 1

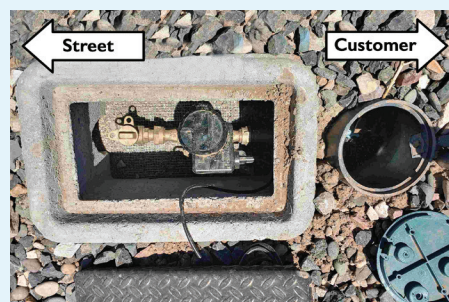


Fig. 2

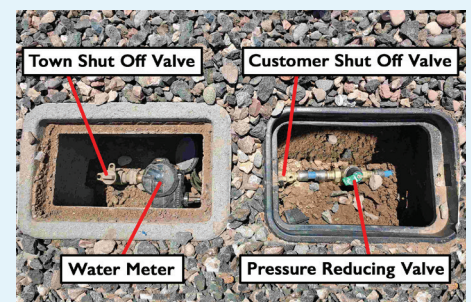


Fig. 3

For a list of abbreviations and definitions, please see p. 7

POSSIBLE HEALTH EFFECTS OF CONTAMINANTS IN DRINKING WATER

Arsenic

If arsenic is less than or equal to the MCL, your drinking water meets EPA's standards. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. 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. To find more information about arsenic, visit: www.legacy.azdeq.gov/environ/water/dw/download/epa_arsenic.pdf

Chlorine

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 chloramines well in excess of the MRDL could experience stomach discomfort or anemia.

Nitrates

Nitrates are inorganic substances that are monitored due to run off from fertilizer use. Nitrates in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. The Town nitrate levels are well below the maximum contaminant level at 2.09 ppm. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant and detected nitrate levels are above 5 ppm, you should contact your health care provider.

Cryptosporidium

Cryptosporidium is an emerging pathogen resistant to chlorination and can appear even in high quality water supplies. New regulations from the EPA require water systems to monitor cryptosporidium and adopt a range of treatment options based on source water cryptosporidium concentrations. The Town has not detected or had any occurrence of cryptosporidium.

Disinfection By-Products

Some people who drink water containing total trihalomethanes and haloacetic acids in excess of the MCL over many years may experience problems with their liver, kidneys or central nervous systems, and may have an increased risk of cancer.

Barium

Some people who drink water containing barium in excess of the MCL over many years may experience an increase in blood pressure.

Copper & Lead

Copper is an essential nutrient. However, if present in drinking water, short term exposure to elevated levels of copper could cause gastrointestinal distress and prolonged use above the action level could cause liver or kidney damage in some people. If present, elevated levels of lead could cause health issues especially for pregnant women and young children. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development and slight deficits in attention span and learning abilities. Adults who drink water containing lead in excess of the action level over many years could develop kidney problems or high blood pressure. Lead primarily comes from erosion of components associated with service lines and home plumbing. If your water has been sitting for several hours, flushing your tap for 30 seconds or more prior to drinking or cooking can minimize the potential for exposure. Information on lead in drinking water and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at www.epa.gov/safewater/lead

Radionuclides

Radionuclides are a group of contaminants consisting of alpha and beta/photon emitters, combined radium 226/228 and uranium. Certain minerals are radioactive and may emit a form of radiation known as alpha, beta or photon radiation. Some people who drink water in excess of the MCL for this group of contaminants over many years may have an increased risk of getting cancer or in some cases kidney problems. Radon gas is a colorless, odorless and tasteless gas that comes from the natural breakdown of uranium. Although there is no federal standard for radon in drinking water, The Town does monitor the radionuclide group and surpasses mandatory health levels established by the EPA and ADEQ. For more information on radon, visit: www.epa.gov/radon

Contaminants & How They May Be Introduced

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. 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. More information about contaminants and potential health effects can be obtained by calling the EPA Safe Drinking Water Hotline (800-426-4791). To receive a copy of the EPA and CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and microbiological contaminants, visit the EPA Safe Drinking Water website at www.epa.gov/sdwa.

Inorganic contaminants such as salts and metals that can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

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

Organic chemical contaminants, including synthetic and volatile organic chemicals that are by-products of industrial processes and petroleum production, can also come from gas stations, urban storm water runoff and septic systems.

Pesticides and herbicides which may come from a variety of sources such as agriculture, urban storm water runoff or residential uses.

Radioactive contaminants, such as radon, alpha emitters, beta/photon emitters, combined radium and uranium that can be naturally occurring or the result of oil and gas production or mining activities, decay or erosion of natural and man-made deposits.

Total trihalomethanes and haloacetic acids are the by-product of drinking water disinfection.

The Water Quality Data Report Table contains the most recent results for regulated testing. The frequency of sample collection is determined by state and federal regulations and based on many different parameters such as type of water source, number of people served, as well as past and current analyses of the contaminant to be tested. Sample frequency can range between one month and three years. The Town is also required to test for unregulated contaminants. The data generated by these tests is used by the EPA to evaluate and prioritize contaminants on the Drinking Water Contaminant Candidate List. Regulated and unregulated contaminants will appear in this report if they are found during testing.

WATER QUALITY REPORT: MONGINI WELL (ADEQ No. AZO4-13-O15)

Primary Drinking Water Standards - Mandatory Health-Related Levels Established by EPA and ADEQ Water Samples Collected from Qualifying Homes Based on ADEQ Site Selection Criteria in Camp Verde, AZ

Microbiological	Violation Y or N	Number of Samples Present OR Highest Level Detected	Absent (A) or Present (P) OR Range of All Samples (L-H)	MCL	MCLG	Sampling Month & Year	Likely Source of Contamination
Total Coliform Bacteria (System takes ≥ 60 monthly samples) 1 of monthly samples are positive; (System takes 12 monthly samples) 1 positive monthly sample	N	1	59 Absent, 1 Present	0	0	Monthly 2022	Naturally present in environment
Disinfectants	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sampling Month & Year	Likely Source of Contamination
Chlorine (ppm)	N	.44	.38-.47	MRDL = 4	MRDLG = 4	RAA	Water additive used to control microbes
Disinfection By-Products	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (ppb) (HAA5)	N	< 2	< 2	60	n/a	8/17/2022	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	N	4.4	4.4	80	n/a	8/18/2022	Byproduct of drinking water disinfection
Lead & Copper	Violation Y or N	90th Percentile AND Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	90th Percentile = 0.16, 0 samples	.01-.19	AL = 1.3	ALG = 1.3	8/18/2020	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	90th Percentile = 0, 0 samples	0	AL = 15	0	8/18/2020	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Combined Radium 226 & 228 (pCi/L)	N	< 1	< 1	5	0	3/16/2020	Erosion of natural deposits
Alpha emitters (pCi/L)	N	< 3	< 3	15	0	3/2/2020	Erosion of natural deposits
Inorganic Chemicals (IOC)	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic (ppb)	N	10	9-12	10	0	RAA	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	.29	.29	2	2	2/26/2020	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	.0023	.0023	100	100	2/26/2020	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	.51	.51	4	4	3/5/2020	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	.30	.30	10	10	6/21/21	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	No MCL	15	15	n/a	n/a	2/26/2020	n/a

For a list of abbreviations and definitions, please see p. 7

WATER QUALITY REPORT: VERDE RIVER ESTATES WELL (ADEQ No. AZO4-13-072)

Primary Drinking Water Standards - Mandatory Health-Related Levels Established by EPA and ADEQ Water Samples Collected from Qualifying Homes Based on ADEQ Site Selection Criteria in Camp Verde, AZ

Microbiological	Violation Y or N	Number of Samples Present OR Highest Level Detected	Absent (A) or Present (P) OR Range of All Samples (L-H)	MCL	MCLG	Sampling Month & Year	Likely Source of Contamination
Total Coliform Bacteria (System takes ≥ 60 monthly samples) 1 of monthly samples are positive; (System takes 12 monthly samples) 1 positive monthly sample	N	1	11 Absent 1 Present	0	0	Monthly 2022	Naturally present in environment
Disinfectants	Violation Y or N	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sampling Month & Year	Likely Source of Contamination
Chlorine (ppm)	N	.44	.37-.53	MRDL = 4	MRDLG = 4	RAA	Water additive used to control microbes
Disinfection By-Products	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (ppb) (HAA5)	N	< 2	< 2	60	n/a	8/18/2020	Byproduct of drinking water disinfection
Total Trihalomethanes (ppb) (TTHM)	N	10.8	10.8	80	n/a	8/18/2020	Byproduct of drinking water disinfection
Lead & Copper	Violation Y or N	90th Percentile AND Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N	90th Percentile = 0.21, 0 samples	.02-.28	AL = 1.3	ALG = 1.3	8/18/2020	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	90th Percentile = 0, 0 samples	0	AL = 15	0	8/18/2020	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Combined Radium 226 & 228 (pCi/L)	N	0.7+-0.3	0.7+-0.3	5	0	7/15/2000	Erosion of natural deposits
Alpha emitters (pCi/L)	N	3.9+- 1.0	3.9+- 1.0	15	0	4/29/2011	Erosion of natural deposits
Inorganic Chemicals (IOC)	Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Arsenic (ppb)	N	< 0	< 0 - .009	10	0	RAA	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Barium (ppm)	N	.15	.15	2	2	4/22/2011	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	1.9	1.9	100	100	4/22/2011	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	.22	.22	4	4	4/21/2011	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	2.0	2.0	10	10	6/21/21	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	No MCL	33	33	n/a	n/a	6/21/2021	n/a

ABBREVIATIONS AND DEFINITIONS

ADEQ (Arizona Department of Environmental Quality)
State Regulatory Agency.

AL (Action Level)

The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements which a water system must follow.

EPA (US Environmental Protection Agency)
Federal Regulatory Agency.

HAA5 (Haloacetic Acids 5)

Five commonly found disinfection byproducts in drinking water.

MCL (Maximum Contaminant Level)

The highest level of a contaminant allowed by the EPA in drinking water. MCLs are set as close to MCLGs as feasible using the best available treatment technology.

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 allow for a margin of safety.

MRDL (Maximum Residual Disinfectant Level)

The highest level of a disinfectant (chlorine) allowed in drinking water. There is convincing scientific evidence that the addition of a disinfectant is required for the control of microbial contaminants.

MRDLG (Maximum Residual Disinfectant Level Goal)

The level of drinking water disinfectant below which there is no known or expected risk to health. MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contamination.

ND (Not Detected)

Concentration too low to be detected.

NTU (Nephelometric Turbidity Units)

A measure of water clarity.

pCi/L (Picocuries Per Liter)

A measure of the radioactivity in water.

PPB (Parts Per Billion)

Or micrograms per liter ($\mu\text{g/L}$), $1000 \text{ ppb} = 1 \text{ ppm}$.

PPM (Parts Per Million)

Or milligrams per liter (mg/L), $1 \text{ mg/L} = 1 \text{ ppm}$.

PQL (Practical Quantitation Limit)

The minimum concentration of an analyte (substance) that can be measured with a high degree of confidence that the analyte is present at or above that concentration.

UCMR4 (Unregulated Contaminant Monitoring Rule #4)

Non-regulated compounds that can be found in water and are monitored for future regulatory agency evaluation.



What is a ppm (parts per million) measurement?



One car in bumper-to-bumper traffic from Cleveland to San Francisco.

What is a ppb (parts per billion) measurement?



One pinch of salt in 10 tons of potato chips!





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