

# Consumer Confidence Report for Calendar Year 2020

Este informe contiene informactión muy importante sobre el aqua usted bebe. Tradúscalo ó hable con alguien que lo entienda bien.

Public Water System ID Number	Public Wate	r System Name				
AZ04-13-051	Black Canyon City Water Improvement District					
Contact Name and Title		Phone Number	E-mail Address			
David E. Moore, Sr./Chair		623-374-9408	chair@bccwid.org			
We want our valued customers to be informed about their water quality. If you would like to learn more about public participation or to attend any of our regularly scheduled meetings, please contact <u>office staff</u> at <u>623-374-9408</u> for additional opportunity and meeting dates and times.						

# **Drinking Water Sources**

The sources of drinking water (both tap 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 pickup substances resulting from the presence of animals or from human activity.

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Our water source(s): Groundwater with six (6) wells drawing from the Agua Fria Aquifer

#### Consecutive Connection Sources - DOES NOT APPLY

A public water system that receives some or all of its finished water from one or more wholesale systems by means of a direct connection or through the distribution system of one or more consecutive systems. Systems that purchase water from another system report regulated contaminants detected from the source water supply in a separate table.

## **Drinking Water Contaminants**

**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**: Such as agriculture, urban storm water runoff, and residential uses that may come from a variety of sources

**Organic Chemical Contaminants**: Such as synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and also may come from gas stations, urban storm water runoff, and septic systems.

**Radioactive Contaminants**: That can be naturally occurring or be the result of oil and gas production and mining activities.

# **Vulnerable Population**

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.

For more information about contaminants and potential health effects, or to receive a copy of the U.S. Environmental Protection Agency (EPA) and the U.S. Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

#### **Source Water Assessment**

"Based on the information currently available on the hydrogeologic settings of and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this Public Water System (PWS), the Department has given a LOW RISK designation for the degee to which this PWS drinking water source(s) are protected. A low risk designation indicates that most source water protection measures are either already implemented, or the hydrogeology is such that the source water protection measures will have little impact on protection."

#### **Definitions**

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

**Level 1 Assessment**: A study of the water system to identify potential problems and determine (if possible) why total coliform bacteria was present

**Level 2 Assessment**: 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 was present

**Action Level (AL)**: The concentration of a contaminant which, if exceeded, triggers treatment, or other requirements

**Maximum Contaminant Level (MCL)**: The highest level of a contaminant that is allowed in 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

**Maximum Residual Disinfectant Level (MRDL)**: The level of disinfectant added for water treatment that may not be exceeded at the consumer's tap

Maximum Residual Disinfectant Level Goal (MRDLG): The level of disinfectant added for treatment at which no known or anticipated adverse effect on health of persons would occur

Minimum Reporting Limit (MRL): The smallest measured concentration of a substance that can be reliably measured by a given analytical method

**Millirems per year (MREM)**: A measure of radiation absorbed by the body

**Not Applicable (NA)**: Sampling was not completed by regulation or was not required

Not Detected (ND or <): Not detectable at reporting limit

**Nephelometric Turbidity Units (NTU)**: A measure of water clarity

Million fibers per liter (MFL)

**Picocuries per liter (pCi/L)**: Measure of the radioactivity in water

**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) ppm x 1000 = ppb

**ppq**: Parts per quadrillion or ppb x 1000 = ppt Picograms per liter (pg/L) ppt x 1000 = ppq

### **Lead Informational Statement:**

Lead, in drinking water, is primarily from materials and components associated with service lines and home plumbing. If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. BLACK CANYON CITY WID 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. 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 Quality Data - Regulated Contaminants

Microbiological (RTCR)	TT Violation Y or N	Number of Positive Samples	Positive Sample(s) Month & Year	MCL	MCLG	Likely Source of Contamination
E. Coli	N			0	0	Human and animal fecal waste
Fecal Indicator (From GWR source) (coliphage, enterococci and/or E. coli)	N			0	0	Human and animal fecal waste
Surface Water Treatment Rule	TT Violation Y or N	Highest Level Detected	% Range (Low-High)	TT	Sample Month & Year	Likely Source of Contamination
Total Organic Carbon <sup>1</sup> (mg/L)	N			TT		Naturally Present in the Environment
Turbidity <sup>2</sup> (NTU)	N			TT		Soil runoff

<sup>&</sup>lt;sup>1</sup> **Total organic carbon (TOC)** has no health effects. However, total organic carbon provides a medium for the formation of disinfection byproducts. These byproducts include trihalomethanes (THM) and haloacetic acids (HAA). Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver, or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.

Running Range of All

MCL

Disinfectants	Violation Y or N	Annual Average (RAA)	Samples (Low-High)	MRDL	MRDLG	Month & Year	Likely Source of Contamination
Chlorine/Chloramine (ppm)	N	0.68		4	0	12/2020	Water additive used to control microbes
Chlorine dioxide (ppb)				800	0		Water additive used to control microbes
Disinfection By-Products	MCL Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Haloacetic Acids (HAA5) (ppb)	N	0.0088		60	N/A	7/2020	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	0.0028		80	N/A	7/2020	Byproduct of drinking water disinfection
Bromate (ppb) if treated with Ozone				10	0		Byproduct of drinking water disinfection
Chlorite (ppm) if treated with CLO2				1	0.8		Byproduct of drinking water disinfection
Lead & Copper	MCL Violation Y or N	90 <sup>th</sup> Percentile	Number of Samples Exceeds AL	AL	ALG	Sample Month & Year	Likely Source of Contamination
Copper (ppm)	N		0	1.3	1.3	7/2020	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	Υ		2	15	0	7/2020	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	MCL Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Beta/Photon Emitters (mrem/yr.)			0	4	0		Decay of natural and man- made deposits
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)				15	0		Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	N	<1		5	0	5/2019	Erosion of natural deposits
Uranium (ug/L)				30	0		Erosion of natural deposits
Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Antimony (ppb)	N	.001		6	6	5/2019	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic¹ (ppb)	N	0.0669		10	0	7/2020	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	<0.2		7	7	2/2013	Decay of asbestos cement water mains; Erosion of natural deposits

Sample Likely Source of

<sup>&</sup>lt;sup>2</sup> **Turbidity** is a measure of the cloudiness of water and is an indication of the effectiveness of our filtration system. We monitor it because it is a good indicator of the quality of water. High turbidity can hinder the effectiveness of disinfectants. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Barium (ppm)	N	<0.002	2	2	5/2019	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	<0.001	4	4	5/2019	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	<0.005	5	5	5/2019	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	N	<0.001	100	100	5/2019	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	N	<0.025	200	200	5/2019	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	0.40	4	4	4/2019	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	N	<0.0002	2	2	5/2019	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate <sup>2</sup> (ppm)	N	1.4	10	10	7/2020	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite (ppm)			1	1		Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	<0.005	50	50	5/2019	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	51	N/A	N/A	5/2019	Erosion of natural deposits
Thallium (ppb)	N	<0.0001	 2	0.5	5/2019	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

<sup>&</sup>lt;sup>1</sup> **Arsenic** is a mineral known to cause cancer in humans at high concentration and is linked to other health effects, such as skin damage and circulatory problems. 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, and continues to research the health effects of low levels of arsenic.

<sup>&</sup>lt;sup>2</sup> Nitrate 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." 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 ask advice from your health care provider.

Synthetic Organic Chemicals (SOC)	MCL Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
2,4-D (ppb)	N	<0.0001		70	70	7/2019	Runoff from herbicide used on row crops
2,4,5-TP (a.k.a. Silvex) (ppb)	N	<0.0002		50	50	7/2019	Residue of banned herbicide
Acrylamide				TT	0		Added to water during sewage / wastewater treatment
Alachlor (ppb)	N	<0.0001		2	0	5/2020	Runoff from herbicide used on row crops
Atrazine (ppb)	N	<0.0005		3	3	7/2019	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)				200	0		Leaching from linings of water storage tanks and distribution lines
Carbofuran (ppb)	N	<0.0005		40	40	7/2019	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	N	<0.0001		2	0	7/2019	Residue of banned termiticide
Dalapon (ppb)	N	<0.001		200	200	7/2019	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	N	<0.0006		400	400	7/2019	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	N	<0.0006		6	0	7/2019	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	N	<0.00001		200	0	5/2020	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples,

							and orchards
Dinoseb (ppb)	N	<0.002		7	7	7/2019	Runoff from herbicide used
Diquat (ppb)	N	<0.0004		20	20	7/2019	on soybeans and vegetables Runoff from herbicide use
Dioxin [a.k.a. 2,3,7,8-TCDD] (ppq)				30	0		Emissions from waste incineration and other combustion; discharge from
Endothall (ppb)	N	<0.005		100	100	7/2019	chemical factories Runoff from herbicide use
Endrin (ppb)	N	<0.00001		2	2	4/2019	Residue of banned insecticide
Epichlorohydrin				ТТ	0		Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N	<0.00001		50	0	5/2020	Discharge from petroleum refineries
Glyphosate (ppb)				700	700		Runoff from herbicide use
Heptachlor (ppt) Heptachlor epoxide (ppt)	N N	<0.00001 <0.00001		400 200	0	5/2020 5/2020	Residue of banned termiticide Breakdown of heptachlor
Hexachlorobenzene (ppb)	N	<0.00005		1	0	7/2019	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclo pentadiene (ppb)	N	<0.00005		50	50	7/2019	Discharge from chemical factories
Lindane (ppt)	N	<0.00001		200	200	5/2020	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	N	<0.00005		40	40	4/2019	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa,
Oxamyl (a.k.a. Vydate) (ppb)	N	<0.0005		200	200	7/2019	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)				500	0		Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)	N	<0.00004		1	0	7/2019	Discharge from wood preserving factories
Picloram (ppb) Simazine (ppb)	N N	<0.0001 <0.00005		500 4	500 4	7/2019 7/2019	Herbicide runoff Herbicide runoff
Toxaphene (ppb)	N	<0.0005		3	0	7/2019	Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Chemicals (VOC)	MCL Violation Y or N	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (Low-High)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Benzene (ppb)	N	<0.0005		5	0	5/2020	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	N	<0.0005		5	0	5/2020	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	N	<0.0005		100	100	7/2019	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	<0.0005		600	600	5/2020	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	<0.0005		75	75	5/2020	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	N	<0.0005		5	0	5/2020	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	N	<0.0005		7	7	5/2020	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	N	<0.0005		70	70	5/2020	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	N	<0.0005		100	100	5/2020	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	<0.0005		5	0	5/2020	Discharge from pharmaceutical and chemical factories
1,2-Dichloropropane (ppb)	N	<0.0005		5	0	7/2019	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	<0.0005		700	700	7/2019	Discharge from petroleum refineries
Styrene (ppb)	N	<0.0005		100	100	7/2019	Discharge from rubber and plastic factories; leaching from landfills
1	1	i e		1	i	i .	Discharge from factories and
Tetrachloroethylene (ppb)	N	<0.0005		5	0	7/2019	dry cleaners

						finishing factories
1,1,1-Trichloroethane (ppb)	N	<0.0005	200	200	7/2019	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	N	<0.0005	5	3	7/2019	Discharge from industrial chemical factories
Trichloroethylene (ppb)	N	<0.0005	5	0	7/2019	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	<0.0005	1	1	7/2019	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	<0.0003	2	0	7/2019	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	<0.0005	10	10	7/2019	Discharge from petroleum or chemical factories

Water Quality Table - Unregulated Contaminant Monitoring Rule

Metals	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
Germanium (ppt)				300	Naturally-occurring element; commercially available in combination with other elements and minerals; a byproduct of zinc ore processing; used in infrared optics, fiber-optic systems, electronics and solar applications
Manganese (ppt)				400	Naturally-occurring element; commercially available in combination with other elements and minerals; used in steel production, fertilizer, batteries and fireworks; drinking water and wastewater treatment chemical; essential nutrient
Pesticides	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
Alpha-hexachlorocyclohexane (ppt)				10	Component of benzene hexachloride (BHC); formerly used as an insecticide
Chlorpyrifos (ppt)				30	Organophosphate; used as an insecticide, acaricide and miticide
Dimethipin (ppt)				200	Used as an herbicide and plant growth regulator
Ethoprop (ppt)				30	Used as an insecticide
Oxyfluorfen (ppt)				50	Used as an herbicide
Profenofos (ppt)				300	Used as an insecticide and acaricide
Tebuconazole (ppt)				200	Used as a fungicide
Total permethrin (cis- & trans-) (ppt)				40	Used as an insecticide
Pesticides Manufacturing By-Product	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
Tribufos (ppt)				700	Used as an insecticide and cotton defoliant Water additive used to control microbes
Alcohols	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
1-butanol (ppb)				2.0	Used as a solvent, food additive and in production of other chemicals
2-methoxyethanol (ppt)				400	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotions
2-propen-1-ol (ppt)				500	Used in the production flavorings, perfumes and other chemicals
Semivolatile Chemicals	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
				30	Used as a food additive (antioxidant)
Butylated hydroxyanisole (ppt)					
Butylated hydroxyanisole (ppt)  O-toluidine (ppt)				7	Used in the production of dyes, rubber, pharmaceuticals and pesticides  Used as a pharmaceutical (anti-malarial) and flavoring agent;

# **Surface Water Monitoring & Violations**

#### **DOES NOT APPLY**

## **Health Effects Language:**

*Cryptosporidium* is a microbial pathogen found in surface water throughout the United States. Although filtration removes cryptosporidium, the most commonly used filtration methods cannot guarantee 100 percent removal. Our monitoring indicates the presence of these organisms in our source water and/or finished water. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. Ingestion of cryptosporidium may cause cryptosporidiosis, an abdominal infection. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immuno-compromised people are at greater risk of developing life-threatening illness. We encourage immuno-compromised individuals to consult their doctor regarding appropriate precautions to take to avoid infection. Cryptosporidium must be ingested to cause disease, and it may be spread through means other than drinking water.

Violation Summary (for MCL, MRDL, AL, TT, or Monitoring & Reporting Requirement)

Violation Type	Explanation, Health Effects	Time Period	Corrective Actions
(Example: Reporting failure)	(Example: Forgot to sample for RTCR)	(Example: 14 days)	(Example: Sent in May results to show that the system is not serving contaminated water)
Lead & Copper	2 out of 10 samples over MCL	7/2020	Public Notification; Additional sampling & follow-up required by ADEQ

Please share this information with 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 notice in a public place or distributing copies by hand or mail.

# Assessments for the Revised Total Coliform Rule (RTCR)

#### **DOES NOT APPLY**

**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. If coliform is found, then the system is responsible to look for potential problems in water treatment or distribution. When this occurs, the water system is required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

**E. coli** are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Human pathogens in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a greater health risk for infants, young children, the elderly, and people with severely compromised immune systems. If *E. coli* bacteria is found, the water system is required 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.

# Failure to Conduct Assessments for the Revised Total Coliform Rule

Contaminant Name	TT Violation Y or N	TT Requirement
Total Coliform	N	NONE