ADEQ Arizona Department of Environmental Quality

Consumer Confidence Report for Calendar Year 2022

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

Public Water System ID Number	Public Water System Name	
AZ04- 10157	Green Valley Domestic Water Improvement District	
Contact Name and Title	**Phone Number**	**E-mail Address**
Dara Duffy, District Manager	520-625-9112	office@gvwaterdistrict.com

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 our office at 520-625-9112 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 from the Santa Cruz aquifer

Consecutive Connection Sources

☑ *Check here if this section does not apply to this system*

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.

PWS # AZ04-_____, provides us a consecutive connection source of water.

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

In 2004, the Arizona Department of Environmental Quality completed a source water assessment for the two wells used by Green Valley Water District. The Assessment reviewed the adjacent land uses that may pose a potential risk to the sources. These risks include, but are not limited to, gas stations,landfills, dry cleaners, agriculture fields, waste water treatment plants, and mining activities.

Once ADEQ identified the adjacent land uses, they were ranked as to their potential to affect the water source. The result of the assessment was there was a low risk to source water of our District.

Further source water assessment documentation can be obtained by contacting ADEQ.

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)

ppq: Parts per quadrillion or Picograms per liter (pg/L)

ppm x 1000 = ppb
ppb x 1000 = ppt
ppt x 1000 = ppq

Lead Informational Statement: *(Applies to All Water Systems, please* do not *remove even if your system did not detect any Lead)*

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. Green 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. 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	N/A	0	0	Human and animal fecal waste
Fecal Indicator (From GWR source) (coliphage, enterococci and/or E. coli)	N	0	N/A	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[1] (mg/L)	N/A	N/A	N/A	TT	N/A	Naturally Present in the Environment
Turbidity[2] (NTU)	N/A	N/A	N/A	TT	N/A	Soil runoff

[1] **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.

[2] **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.

Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDLG	Sample Month & Year	Likely Source of Contamination
Chlorine/Chloramine (ppm)	N	0.69	0.47-0.84	4	4	12/2022	Water additive used to control microbes
Chlorine dioxide (ppb) if treated with CLO2	N/A	N/A	N/A	800	0	N/A	Water additive used to control microbes
Disinfection By-Products	**MCL Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (Low-High)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Haloacetic Acids (HAA5) (ppb)	N	<0.0020	<0.0020	60	N/A	7/2022	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	17.2 ppb	5.6-17.2 ppb	80	N/A	7/2022	Byproduct of drinking water disinfection
Bromate (ppb) if treated with Ozone	N/A	N/A	N/A	10	0	N/A	Byproduct of drinking water disinfection
Chlorite (ppm) if treated with CLO2	N/A	N/A	N/A	1	0.8	N/A	Byproduct of drinking water disinfection
Lead & Copper	**MCL Violation Y or N**	**90th Percentile**	**Number of Samples Exceeds AL**	**AL**	**ALG**	**Sample Month & Year**	**Likely Source of Contamination**
Copper (ppm)	N	0.087	0	1.3	1.3	7/2022	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	<5	0	15	0	7/2022	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	**MCL Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (Low-High)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Beta/Photon Emitters (mrem/yr.)	N	N/A	N/A	4	0	N/A	Decay of natural and man-made deposits
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)	N	3.71 PCI/L	3.71 PCI/L	15	0	11/2022	Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	N	<0.6 PCI/L	<0.6 PCI/L	5	0	11/2022	Erosion of natural deposits
Uranium (ug/L)	N	N/A	N/A	30	0	N/A	Erosion of natural deposits
Inorganic Chemicals (IOC)	**MCL Violation Y or N**	**Running Annual Average (RAA) OR Highest Level**	**Range of All Samples (Low-High)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**

		Detected					
Antimony (ppb)	N	<0.001	<0.001	6	6	3/2021	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic[1] (ppb)	N	6.5 ppb	5.5 - 7.7 ppb	10	0	1/22-12/22	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	N	ND	ND	7	7	12/2012	Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	N	0.0083	0.0083	2	2	3/2021	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	N	<0.001	<0.001	4	4	3/2021	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	N	<0.0005	<0.0005	5	5	3/2021	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	N	1.6	1.6	100	100	3/2021	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	N	<0.025	<0.025	200	200	3/2021	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	N	0.85	0.85	4	4	3/2021	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	N	<0.0002	<0.0002	2	2	3/2021	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland.
Nitrate (ppm)	N	0.65	0.65	10	10	10/2022	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite[2] (ppm)	N	<0.05	<0.05	1	1	2/2021	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	<0.005	<0.005	50	50	3/2021	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	N	42	42	N/A	N/A	3/2021	Erosion of natural deposits
Thallium (ppb)	N	<0.001	<0.001	2	0.5	3/2021	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

[1] **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.

[2] **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) OR 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	<0.0001	70	70	3/2021	Runoff from herbicide used on row crops
2,4,5-TP (a.k.a. Silvex) (ppb)	N	<0.0002	<0.0002	50	50	3/2021	Residue of banned herbicide
Acrylamide	N	<0.0005	<0.0005	TT	0	6/2018	Added to water during sewage / wastewater treatment
Alachlor (ppb)	N	<0.0001	<0.0001	2	0	2/2021	Runoff from herbicide used on row crops
Atrazine (ppb)	N	<0.00005	<0.00005	3	3	3/2021	Runoff from herbicide used on row crops
Benzo (a) pyrene (PAH) (ppt)	N	<0.00002	<0.00002	200	0	3/2021	Leaching from linings of water storage tanks and distribution lines

Carbofuran (ppb)	N	<0.0005	<0.0005	40	40	3/2021	Leaching of soil fumigant used on rice and alfalfa
Chlordane (ppb)	N	<0.0001	<0.0001	2	0	2/2021	Residue of banned termiticide
Dalapon (ppb)	N	<0.001	<0.001	200	200	3/2021	Runoff from herbicide used on rights of way
Di (2-ethylhexyl) adipate (ppb)	N	<0.0006	<0.0006	400	400	3/2021	Discharge from chemical factories
Di (2-ethylhexyl) phthalate (ppb)	N	<0.0006	<0.0006	6	0	3/2021	Discharge from rubber and chemical factories
Dibromochloropropane (ppt)	N	<0.00001	<0.00001	200	0	3/2021	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards
Dinoseb (ppb)	N	<0.0002	<0.0002	7	7	3/2021	Runoff from herbicide used on soybeans and vegetables
Diquat (ppb)	N	<0.0004	<0.0004	20	20	3/2021	Runoff from herbicide use
Dioxin [a.k.a. 2,3,7,8-TCDD] (ppq)	N	<0.000000005	<0.000000005	30	0	3/2021	Emissions from waste incineration and other combustion; discharge from chemical factories
Endothall (ppb)	N	<0.005	<0.005	100	100	3/2021	Runoff from herbicide use
Endrin (ppb)	N	<0.00001	<0.00001	2	2	2/2021	Residue of banned insecticide
Epichlorohydrin	N	<0.001	<0.001	TT	0	6/2018	Discharge from industrial chemical factories; an impurity of some water treatment chemicals
Ethylene dibromide (ppt)	N	<0.00001	<0.00001	50	0	3/2021	Discharge from petroleum refineries
Glyphosate (ppb)	N	<0.006	<0.006	700	700	3/2021	Runoff from herbicide use
Heptachlor (ppt)	N	<0.00001	<0.00001	400	0	2/2021	Residue of banned termiticide
Heptachlor epoxide (ppt)	N	<0.00001	<0.00001	200	0	2/2021	Breakdown of heptachlor
Hexachlorobenzene (ppb)	N	<0.00005	<0.00005	1	0	3/2021	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclo pentadiene (ppb)	N	<0.00005	<0.00005	50	50	3/2021	Discharge from chemical factories
Lindane (ppt)	N	<0.00001	<0.00001	200	200	2/2021	Runoff/leaching from insecticide used on cattle, lumber, gardens
Methoxychlor (ppb)	N	<0.00005	<0.00005	40	40	2/2021	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa,
Oxamyl (a.k.a. Vydate) (ppb)	N	<0.0005	<0.0005	200	200	3/2021	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs [Polychlorinated biphenyls] (ppt)	N	<0.0001	<0.0001	500	0	6/2018	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol (ppb)	N	<0.00004	<0.00004	1	0	3/2021	Discharge from wood preserving factories
Picloram (ppb)	N	<0.0001	<0.0001	500	500	3/2021	Herbicide runoff
Simazine (ppb)	N	<0.00005	<0.00005	4	4	3/2021	Herbicide runoff
Toxaphene (ppb)	N	<0.0005	<0.0005	3	0	2/2021	Runoff/leaching from insecticide used on cotton and cattle
Volatile Organic Chemicals (VOC)	**MCL Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (Low-High)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Benzene (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from factories; leaching from gas storage tanks and landfills
Carbon tetrachloride (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from chemical plants and other industrial activities
Chlorobenzene (ppb)	N	<0.0005	<0.0005	100	100	3/2021	Discharge from chemical and agricultural chemical factories
o-Dichlorobenzene (ppb)	N	<0.0005	<0.0005	600	600	3/2021	Discharge from industrial chemical factories
p-Dichlorobenzene (ppb)	N	<0.0005	<0.0005	75	75	3/2021	Discharge from industrial chemical factories
1,2-Dichloroethane (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from industrial chemical factories
1,1-Dichloroethylene (ppb)	N	<0.0005	<0.0005	7	7	3/2021	Discharge from industrial chemical factories
cis-1,2-Dichloroethylene (ppb)	N	<0.0005	<0.0005	70	70	3/2021	Discharge from industrial chemical factories
trans-1,2-Dichloroethylene (ppb)	N	<0.0005	<0.0005	100	100	3/2021	Discharge from industrial chemical factories
Dichloromethane (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from pharmaceutical and chemical

							factories
1,2-Dichloropropane (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from industrial chemical factories
Ethylbenzene (ppb)	N	<0.0005	<0.0005	700	700	3/2021	Discharge from petroleum refineries
Styrene (ppb)	N	<0.0005	<0.0005	100	100	3/2021	Discharge from rubber and plastic factories; leaching from landfills
Tetrachloroethylene (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from factories and dry cleaners
1,2,4-Trichlorobenzene (ppb)	N	<0.0005	<0.0005	70	70	3/2021	Discharge from textile-finishing factories
1,1,1-Trichloroethane (ppb)	N	<0.0005	<0.0005	200	200	3/2021	Discharge from metal degreasing sites and other factories
1,1,2-Trichloroethane (ppb)	N	<0.0005	<0.0005	5	3	3/2021	Discharge from industrial chemical factories
Trichloroethylene (ppb)	N	<0.0005	<0.0005	5	0	3/2021	Discharge from metal degreasing sites and other factories
Toluene (ppm)	N	<0.0005	<0.0005	1	1	3/2021	Discharge from petroleum factories
Vinyl Chloride (ppb)	N	<0.0003	<0.0003	2	0	3/2021	Leaching from PVC piping; discharge from chemical factories
Xylenes (ppm)	N	<0.0005	<0.0005	10	10	3/2021	Discharge from petroleum or chemical factories

Water Quality Table - Unregulated Contaminants

☑ *Check here if this section does not apply to this system*

Metals	Detected (Y/N)	Average	Range of All Samples (Low-High)	MRL	Likely Source of Contamination
Germanium (ppt)	N/A	N/A	N/A	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)	N/A	N/A	N/A	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)	N/A	N/A	N/A	10	Component of benzene hexachloride (BHC); formerly used as an insecticide
Chlorpyrifos (ppt)	N/A	N/A	N/A	30	Organophosphate; used as an insecticide, acaricide and miticide
Dimethipin (ppt)	N/A	N/A	N/A	200	Used as an herbicide and plant growth regulator
Ethoprop (ppt)	N/A	N/A	N/A	30	Used as an insecticide
Oxyfluorfen (ppt)	N/A	N/A	N/A	50	Used as an herbicide
Profenofos (ppt)	N/A	N/A	N/A	300	Used as an insecticide and acaricide
Tebuconazole (ppt)	N/A	N/A	N/A	200	Used as a fungicide
Total permethrin (cis- & trans-) (ppt)	N/A	N/A	N/A	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)	N/A	N/A	N/A	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)	N/A	N/A	N/A	2.0	Used as a solvent, food additive and in production of other chemicals
2-methoxyethanol (ppt)	N/A	N/A	N/A	400	Used in a number of consumer products, such as synthetic cosmetics, perfumes, fragrances, hair preparations and skin lotions
2-propen-1-ol (ppt)	N/A	N/A	N/A	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**
Butylated hydroxyanisole (ppt)	N/A	N/A	N/A	30	Used as a food additive (antioxidant)
O-toluidine (ppt)	N/A	N/A	N/A	7	Used in the production of dyes, rubber, pharmaceuticals and pesticides
Quinolone (ppt)	N/A	N/A	N/A	20	Used as a pharmaceutical (anti-malarial) and flavoring agent; produced as a chemical intermediate; component of coal

Surface Water Monitoring & Violations ☑ *Check here if this section does not apply to this system*

Cryptosporidium was detected in the finished water or source water. We detected *Cryptosporidium* in of our samples tested. If *Cryptosporidium* is found at greater than 0.075 oocyst per liter, we have to provide additional treatment. We believe it is important for you to know that *Cryptosporidium* may cause serious illness in 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. These people should seek advice from their health care providers.

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)
Late Reporting for MRDLs	Samples were taken but reported late	4th Quarter 2022	MRDL Report was sent

Assessments for the Revised Total Coliform Rule (RTCR) ☑ *Check here if this section does not apply to this system*

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.

- During the past year, we were required to conduct Level 1 assessment(s). Level 1 assessment(s) were completed. In addition, we were required to take corrective actions and we completed of these actions.
- During the past year, we were required to conduct Level 2 assessment(s). Level 2 assessment(s) were completed. In addition, we were required to take corrective actions and we completed of these actions.

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.

- During the past year, we were required to complete Level 2 assessment(s) because we found *E. coli* in our water system. In addition, we were required to take corrective actions and we completed of these actions.

Failure to Conduct Assessments for RTCR ☑ *Check here if this section does not apply to this system*

Contaminant Name	TT Violation Y or N	TT Requirement
Total Coliform		We were required to conduct an assessment of our system due to one of the following: • More than 5.0% positive samples per period (if the number of samples are greater than or equal to 40) • OR More than 1 positive sample per period (if the number of samples are less than 40) • OR Repeat samples not collected after positive sample.

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.

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Why Green Valley Water District drilled the Cotonia Well

The original Well #1 was dug in 1978 along Placita De La Cotonia near West Frontage Road. For many years Well #1 was a primary well for the Green Valley Water District, providing potable water for our customers. Over decades of use, normal wear and tear began to impact the well casing and an inspection performed in 2017 indicated that it would be prudent to plan for a replacement well. Engineering for the new well began in 2019 with construction starting in early 2020 and completion of the new Cotonia Well occurring in late 2020. Well #1 has now been sealed and the Cotonia Well is our new primary source of potable water for our customers.

The Cotonia well is deeper than the original well and the District was able to place the new well within the existing footprint of the treatment plant to take advantage of the existing electrical and piping connections with a minimum of new construction thus keeping costs low.

The District now has a state-of-the-art production well that should serve our needs far into the future.

Water Hardness is considered a Secondary Contaminant.

Health/Sanitary Significance: Hardness is a natural characteristic of water which can enhance its palatability and consumer acceptability for drinking purposes. Health studies in several countries in recent years indicate that mortality rates from heart diseases are lower in areas with hard water. Background Information: Originally taken to be the capacity of a water to destroy the lather of soap, hardness was determined formerly by titration with soap solution. Currently, the analysis comprises the determination of calcium and magnesium which are the main constituents of hardness. Although barium, strontium and iron can also contribute to hardness, their concentrations are normally so low in this context that they can be ignored. Thus, total hardness is taken to comprise the calcium and magnesium concentrations expressed as mg/l CaCO3. The widespread abundance of these metals in rock formations leads often to very considerable hardness levels in surface and ground waters.

Date Analyzed	Contaminant Tested	Location	Test Results	PQL	Units
1/20/21	Calcium	Cotonia	33	1.0	mg/L
1/20/21	Magnesium	Cotonia	3.3	1.0	mg/L
1/20/21	Potassium	Cotonia	2.8	1.0	mg/L
1/20/21	Sodium	Cotonia	43	1.0	mg/L
1/20/21	Calcium Hardness as CaCO3	Cotonia	83	2.5	mg/L
1/20/21	Magnesium Hardness as CaCO	Cotonia	14	4.1	mg/L
1/20/21	Total Hardness as CaCO3	Cotonia	97	4.1	mg/L
1/20/21	Total Alkalinity as CaCO3	Cotonia	140	10	mg/L
1/20/21	Bicarbonate Alkalinity	Cotonia	140	10.0	mg/L
1/20/21	Chloride	Cotonia	11.1	5.0	mg/L
1/20/21	Sulfate	Cotonia	32.4	5.0	mg/L

Our water hardness converted to grains is 5.67 grains per gallon

The following is one of several such arbitrary classifications of waters by hardness:

Soft up to 50 mg/l CaCO3
Moderately Soft 51-100 mg/l CaCO3
Slightly Hard 101 - 150 mg/l CaCO3
Moderately Hard 151-250 mg/l CaCO3
Hard 251-350 mg/l CaCO3
Excessively Hard over 350 mg/l CaCO3