VALLEY UTILITIES WATER CO. INC.
6808 N. DYSART RD., SUITE 112
GLENDALE, AZ 85307
(623) 935-1100

2018 Drinking Water Annual Water Quality Report

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. We want you to understand the efforts we make to continually monitor the water quality process and protect our water resources. We are committed to ensuring the quality of the water provided to you. We are pleased to report that our drinking water is safe and meets federal and state requirements. This report shows our water quality and what it means.

Our water and its source.

Valley Utilities water comes from deep underground, from the Agua Fria aquifer. Our aquifer was created primarily from mountain runoff and storm water infiltrating beneath the ground along the Agua Fria River and up in the Bradshaw mountain range.

Our 5 active wells pump water from 350 to 800 feet below the earth's surface from the aquifer. Water from the wells is pumped into storage tanks. With a series of booster pumps, the water is pressurized and pumped through transmission and distribution mains to reach your home.

Source Water Assessment Report

Source water protection is a method to identify, develop and implement local measures that advance the protection of the drinking water supply. Based on the information currently available on the hydro geologic setting of and the adjacent land uses that are in the specified proximity of the drinking water sources of Valley Utilities Water Company Inc., A.D.E.Q. has given a low risk designation for the degree to which our public water system drinking water sources are protected. **The Source Water Assessment Report is available at our office upon your request.**

Who do I contact if I have any questions about Valley Utilities drinking water supply or this report? If you have any questions about your water or this report please call (623) 935-1100 during normal business hours (8:00 am to 11:30 am & 12:30 pm to 4:00 pm., Tuesday through Friday, except holidays.)

Monitoring your drinking water is important to us.

Valley Utilities Water Company and the State of Arizona via ADEQ's Monitoring Assistance Program, routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2018. 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. More information about contaminants and potential health effects can be obtained by calling 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 healthcare providers. Environmental Protection Agency/Center For Disease Control 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).

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 land, it dissolves naturally occurring minerals and, in some cases, radio active 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, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- For public Pesticides and herbicides which may come from a variety of sources such as agriculture, urban storm water run-off and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban storm water run-off, and septic systems.

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- Radioactive contaminants, which can be naturally occurring, will be the result of oil and gas production and mining activities.

In order to insure 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 regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Lead and Copper Health Information

Infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community as a result of materials used in your homes plumbing. If you are concerned about elevated lead levels in your home's water, you may wish to have your water tested and flush your tap for 30 seconds to 2 minutes before using tap water. Additional information is available from the Safe Drinking Water Hotline 1-800- 426-4791.

Arsenic Health Information

"While your drinking water meets EPA's standard for arsenic, it does contain low levels of arsenic. 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."

Nitrate Health Information

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 you should ask advice from your health care provider. Valley Utilities provided its customers drinking water below the MCL of 10 ppm during 2018.

Attencion, hablantes de Espanol

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.

In this table you will find many terms and abbreviations you might not be familiar with.

Maximum Contaminant Level (MCL):
The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
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 allow for a margin of safety.
Maximum Residual Disinfection 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 Disinfection 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.

To help you better understand these terms we've provided the following definitions:

Non-Detects **(ND)**
Not Applicable **(NA)**
Parts per million **(ppm)**
Parts per billion **(ppb)**
Parts per trillion **(ppt)**
Parts per quadrillion **(ppq)**
Picocuries per liter **(pCi/L)**
Entry Point Distribution System **(EPDS)**
Millirems per year **(mrem/yr)**
Million Fibers per Liter **(MFL)**
Nephelometric Turbidity Unit **(NTU)**
Variances & Exemptions **(V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
An MCL based on running annual average of monthly sample **(AVG)**
Action Level **(AL)**
Treatment Technique **(TT)**
Maximum Contaminant Level – **(MCL)**
Maximum Contaminant Level Goal – **(MCLG)**
Maximum Residual disinfection Level Goal–**(MRDLG)**
Maximum Residual Disinfection Level **– (MRDL)**

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Water Conservation

Water conservation is everyone's responsibility and there are many ways to accomplish conservation. Stay vigilant in finding and repairing ALL water leaks regardless how small. A small investment in repairs today will pay big dividends in the future. The following are a few simple ways to conserve water:

1. Install water-saving shower heads.

2. Many high water consumption problems stem from toilets which slowly leak water because of bad valves, improperly positioned float arms or defective overflow tubes. Use anything that will safely color the water in your toilet tank. After several minutes if you see that color in your toilet bowl you know you have a leak. Consider installing a high efficiency toilet (HET) that only uses 1.28 gallons/flush.

3. Wash only full loads in the dishwasher. Use the "light wash" setting when possible.

4. Water your lawn in the early morning hours or early evening. In many cases when you water your lawn in the heat of the day as much as 90 percent of that water can evaporate.

A note from the team at Valley Utilities Water Company:

All of us at Valley Utilities are concerned about the quality and cost of our product, the water we deliver to your home. As we have all experienced the price of everything is on the rise and the cost of producing and treating the water we deliver to your homes and businesses is no exception. Although we pump the water from a deep underground aquifer, we constantly monitor for quality and treat for harmful constituents as they are identified by the agencies that regulate our industry. Not only is this the right thing to do and a requirement of the law but there is an even more compelling reason for our diligence, we who work here, as well as our children and grandchildren, drink and use this same water. Even with all of our testing monitoring and treatment, we also depend on you, our customers, to advise us if you notice any differences in the water such as taste, color and aroma, even pressure. We also depend on our customers to report any water leaks, not only in our transmission and distribution system but also for your neighbor's homes and businesses.

There is another area where we depend on our customers help. Please, call us if you see anyone, other than a Valley Utilities employee, working on water company equipment. Also, if you suspect someone is tampering with any water company equipment or on company property, call us any time day or night. Intentional damage to equipment or theft of water costs all of us money. Worst of all, intentional or accidental contamination of a water source or water lines could be devastating to people's health and costly to all of us who pay for the water we use.

With the aid of our customers, we at Valley Utilities will continue to deliver to your tap, dependable, high quality water, at a reasonable price.

Thank you for your help in our ongoing effort, from all of us at Valley Utilities.

Valley Utilities Water Company

2018 WATER QUALITY RESULTS								
Contaminant	Violation Y/N	Collection Date	Highest Level Detected	**Range of Levels Detected**	**Unit Measurement**	MCLG	MCL	Likely Source of Contamination
Regulated Contaminants								
Total Coliform Bacteria	N	2018	0	n/a	n/a	0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Fecal coliform and *E.coli*	N	2018	0	n/a	n/a	0	0	Human and animal fecal waste
Chlorine Disinfectant Residual (ppm)	N	2018	.86	.61 - .86	mg/l	**MRDL=4**	**MRDL=4**	Water additives used to control microbes
Total Trihalomethanes (TTHM)	N	2018	24	15.8 – 31.5	ppb	NA	80	Byproducts from disinfection of drinking water
Haloacetic Acids (HAA5)	N	2018	2	0 – 4.4	ppb	NA	60	Byproducts from disinfection of drinking water
Copper	N	2017	90th Percentile 0.14	n/a	ppm	1.3	1.3	Erosion of natural deposits; Leaching from wood preservations; Corrosion of household plumbing systems.
Lead Consumer Notice (LCR)	Y	2017						We failed to provide the results of lead tap water monitoring to the consumers at the location water was tested within 30 days of receiving results. Violation has been corrected.
Inorganic Contaminants								
Arsenic	N	2018	6	4.7 - 10	ppb	NA	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Nitrate (as Nitrogen)	N	2018	7	4.3 – 7.2	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium	N	2018	.12	.079 - .12	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride	N	2018	1	.68 – 1	ppm	4	4	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Chromium	N	2018	12	8.9 – 12	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.
Selenium	N	2018	8	ND - 8	ppb	50	50	Discharge from petroleum and metal refineries, discharge from mines, erosion of natural deposits.
Unregulated Contaminants								
Sodium	N	2018	140	65 - 140	ppm	N/A	N/A	Erosion of natural deposits, leaching.
Radioactive Contaminants								
Gross alpha excluding radon and uranium	N	2018	2.5	2.5 – 2.5	pCi/L	0	15	Erosion of natural deposits.

Valley Utilities Water Company is inter-connected with Liberty Utilities and Tierra Buena Water Company, and from time to time Valley will acquire needed water from either/both sources. Pursuant to state regulations we are required to include the annual water quality report from any water source used other than Valley Utilities. Below are the 2018 annual water quality results for those utilities.

Tierra Buena Water Company

2018 WATER QUALITY RESULTS								
Contaminant	Violation Y/N	Collection Date	Highest Level Detected	**Range of Levels Detected**	**Unit Measurement**	MCLG	MCL	Likely Source of Contamination
Regulated Contaminants								
Total Coliform Bacteria	N	2018	0	n/a	n/a	0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Fecal coliform and *E.coli*	N	2018	0	n/a	n/a	0	0	Human and animal fecal waste
Chlorine Disinfectant Residual (ppm)	N	2018	1	1 - 1	mg/l	**MRDL=4**	**MRDL=4**	Water additives used to control microbes
Total Trihalomethanes (TTHM)	Y	2018	2	1.6 - 1.6	ppb	NA	80	Byproducts from disinfection of drinking water. Violation: We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Haloaecitic Acids (HAA5)	Y	2018	ND	ND	ppb	NA	60	Byproducts from disinfection of drinking water. Violation: We failed to test our drinking water for the contaminant and period indicated. Because of this failure, we cannot be sure of the quality of our drinking water during the period indicated.
Copper	N	2017	90th Percentile 0.12	NA	ppm	Action Level 1.3	1.3	Erosion of natural deposits; Leaching from wood preservations; Corrosion of household plumbing systems.
Lead	N	2017	90th Percentile 15	NA	ppb	Action Level 0	15	Corrosion of household plumbing systems; Erosion of natural deposits.
Inorganic Contaminants								
Arsenic	N	2018	10	9.3 - 12	ppb	n/a	10	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Fluoride	N	2014	1	1 - 1	ppm	4.0	4.0	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (as Nitrogen)	N	2018	3	2.9 – 2.9	ppm	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Barium	N	2014	.054	.054 - .054	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Chromium	N	2014	8.4	8.4 – 8.4	ppb	100	100	Discharge from steel and pulp mills; Erosion of natural deposits.
Radioactive Contaminants								
Gross alpha excluding radon and uranium	N	2014	3	3 - 3	pci/L	0	15	Erosion of natural deposits.

Combined Radium 226/228	N	2014	.9	.9 - .9	pci/L	0	5	Erosion of natural deposits.

Unregulated Contaminants

Sodium	N	2018	75	75	ppm	N/A	N/A	Erosion of natural deposits, leaching.

LEAD AND COPPER—Tested at customer's taps every 3 years. Testing year - 2016							
Contaminant	**EPA's Action Level (AL)**	**Ideal Goal (EPA's MCLG)**	**Lowest to Highest results found**	**Average of Detected Results**	**Samples Exceeding AL**	**Violation**	**Typical Sources**
Copper	90% of homes less than 1.3 ppm	1.3 ppm	ND - 0.166	0.074	0	No	Corrosion of household plumbing systems: erosion of natural deposits
Lead	90% of homes less than 15 ppb	0 ppb	ND—6.6	2.5	0	No	Corrosion of household plumbing systems: erosion of natural deposits

INORGANIC CHEMICALS							
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Range of Test Results**	**Highest Detected Result**	**Year Tested**	**Violation**	**Typical Sources**
Arsenic	10 ppb	0 ppb	5—8	8	2018	No	Erosion of natural deposits, runoff from orchards and glass and electronic production waste.
Barium	2 ppm	2 ppm	0.05 - 0.12	0.12	2016	No	Erosion of natural deposits, discharge from metal refineries and drilling wastes.
Fluoride	4 ppm	4 ppm	0.43 - 1.45	1.45	2016	No	Erosion of natural deposits, water additive which promotes strong teeth; discharge from fertilizer and
Chromium	100 ppb	100 ppb	ND - 10	10	2016	No	Discharge from steel and pulp mills, erosion of natural deposits
Selenium	50 ppb	50 ppb	ND - 11	11	2016	No	Discharge from petroleum and metal refineries, discharge from mines, erosion of natural deposits
Nitrate	10 ppm	10 ppm	4—8	8	2017	No	Erosion of natural deposits, runoff from fertilizer use-leaching from septic tanks, sewage

RADIOACTIVE CONTAMINANTS							
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Range of Test Results**	**Highest Detected Result**	**Year Tested**	**Violation**	**Typical Sources**
Gross Alpha	15 pCi/L	0 pCi/L	2 - 6	6	2016	No	Erosion from natural deposits
Uranium	30 ug/L	0 ug/L	1.3 - 5	5	2010	No	Erosion from natural deposits
Combined Radium	5 pCi/L	0 pCi/L	ND	ND	2016	No	Erosion from natural deposits

ORGANIC SYNTHETIC COMPOUND—Tested in 2016						
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Range of Test Results**	**Average or Highest Detected**	**Violation**	**Typical Sources**
Di (2-ethylhexyl) phthalate	6 ppb	0 ppb	ND	ND	No	Discharge from rubber and chemical factories

DISINFECTANTS AND DISINFECTION BYPRODUCTS—Tested in 2018						
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Range of Test Results**	**Highest Detected Result**	**Violation**	**Typical Sources**
Sodium Hypochlorite (MRDL)	4 mg/L	4 mg/L	1—1	1	No	Water additive used to control microbes
Haloacetic Acids(HAA5s)	60 ppb	NA	<2.0—2.5	2.5	No	Byproduct of drinking water chlorination
Total Trihalo-methanes (TTHM)	80 ppb	NA	10.0—23.6	23.6	No	Byproduct of drinking water chlorination

MICROBIOLOGICAL—Tested in 2018							
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Range of Test Results**	**Highest Month %**	**Present or Absent**	**Violation**	**Typical Sources**
Total Coliform	NA	NA	0 - 0	0	Absent	No	Naturally present in the environment

Testing of Unregulated Contaminants

Our utility is committed to protecting public health and meets or surpasses all state and federal health standards for tap water. To help advance the science of drinking water, we have been collecting data for the EPA since the Unregulated Contaminant Monitoring Rule was enacted. Collecting information about the occurrence of these compounds in water supplies is the first step in the EPA's efforts to determine whether they should be regulated.

UNREGULATED CONTAMINANTS—Tested in 2014						
Contaminant	**Highest Level Allowed (EPA's MCL)**	**Ideal Goal (EPA's MCLG)**	**Range of Test Results**	**Average of Detected Results**	**Violation**	**Typical Sources**
Sodium (mg/L)	NA	NA	58 - 235	120.2	No	Erosion from natural deposits, leaching
Hardness (grains/gallon)	NA	NA	9.11—15.5	11.09	No	Erosion from natural deposits, leaching

UNREGULATED CONTAMINANTS — Tested in 2018					
Contaminant	**Minimum Reporting Level**	**Range of Test Results**	**Average of Detected Results**	**Violation**	**Typical Sources**
Germanium	0.30 ppb	0.32—0.77 ppb	0.43 ppb	No	
Manganese	0.40 ppb	ND—32 ppb	5.53 ppb	No	
1-Butanol	2 ppb	ND-ND	ND	No	
2-Methoxyethanol	0.4 ppb	ND-ND	ND	No	
2-Propen-1-ol	0.5 ppb	ND-ND	ND	No	
Alpha-Hexachlorocyclohexane	0.0101 ppb	ND-ND	ND	No	
Chlorpyrifos	0.0303 ppb	ND-ND	ND	No	
cis-Permethrin	0.011 ppb	ND-ND	ND	No	
Dimethipin	0.202 ppb	ND-ND	ND	No	
Ethoprop	0.0303 ppb	ND-ND	ND	No	
Oxyfluorfen	0.0505 ppb	ND-ND	ND	No	
Permethrin, cis & trans	0.0404 ppb	ND-ND	ND	No	
Profenofos	0.303 ppb	ND-ND	ND	No	
Tebuconazole	0.202 ppb	ND-ND	ND	No	
trans-Permethrin	0.0293 ppb	ND-ND	ND	No	
Tribufos	0.0707 ppb	ND-ND	ND	No	