

# 2017 Annual Drinking Water Quality Report For Ash Fork Water Service Public Water System Number: AZ04 -13-008

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

We are pleased to present to you this year's water quality report. Our constant goal is to provide you with a **safe and dependable** supply of drinking water.

**We want our valued customers to be informed about their water quality.**

You may contact the Ash Fork Water Service Manager, Lewis Hume at (928) 637-2774 to learn more about what you can do to help protect your drinking water sources, any questions about the annual drinking water quality report, to learn more about our system, or to attend scheduled public meetings. We want you, **Our Valued Customers**, to be informed about the services we provide and the quality water we deliver to you every day.

*Regular meetings are held on the 3<sup>rd</sup> Wednesday of each month at 7:00 PM in the LLC Building, Escalante Rm., 450 West Lewis Ave. Ash Fork, AZ. There is no meeting in December and the August meeting is held on the first Monday at 8:00 PM as this is the Annual Meeting and Election of the Board of Directors.'*

*"Some account holders may have voting rights."*

## **General Information About Drinking Water**

All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk. 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 of 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**.

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include:

- **Microbial contaminants**, such as viruses and bacteria that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- **Pesticides and herbicides** that may come from a variety of sources, such as agriculture, urban storm water runoff, and residential uses.
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are byproducts 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.

*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)**

Ash Fork Water Service maintains 2-groundwater wells, located approx. 1.5 miles south of Ash Fork. This ground water is drawn from a regional aquifer comprised of the Tapeats Sandstone and in some cases the Martin Limestone. This water bearing strata is at a depth of 960' to 1270' below land surface and produces a calcium-sodium bicarbonate water type.

### **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, the department has given a low risk designation for the degree to which this public water system 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.

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

### **Definitions**

**Treatment Technique (T):** 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

ppm= mg/l

**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 Picograms per liter (pg/L)

ppb x 1000 = ppt

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. Ash Fork Water Service 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](http://www.epa.gov/safewater/lead).

### Water Quality Data

We routinely monitor for contaminants in your drinking water according to Federal and State laws. The State of Arizona requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. Some of our data, though representative, may be more than one year old.

These tables show the results of our monitoring for the period of January 1 to December 31, 2017 unless otherwise noted.

#### 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	0	Human and animal fecal waste	
Fecal Indicator (From GWR source) (coliphage, enterococci and/or E. coli)	N	0		0	0	Human and animal fecal waste	
Disinfectants	MCL Violation Y or N	Running Annual Average (RAA)	Range of All Samples (Low-High)	MRDL	MRDL G	Sample Month & Year	Likely Source of Contamination
Chlorine/Chloramine (ppm)	N	0.32	0.13- 0.65	4.0	0	2017	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	46		60	N/A	9/2017	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) (ppb)	N	<0.20		80	N/A	9/2017	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	0.102	0	1.3	1.3	8/2015	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	1.1	0	15	0	8/2015	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/A	N/A		4	0		Decay of natural and man-made deposits
Alpha Emitters (pCi/L) (This is Gross Alpha 4000)	NO	3.0 +/- 0.4		15	0	5/2016	Erosion of natural deposits
Combined Radium-226 & -228 (pCi/L)	NO	1.2 +/- 0.3		5	0	5/2016	Erosion of natural deposits
Uranium (ug/L)	N/A	N/A		30	0		Erosion of natural deposits

Inorganic Chemicals (IOC)	MCL Violation Y or N	Running Annual Average (RAA) OR Highest Level Detected	Range of All Samples	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Antimony (ppb)	NO	<0.001		6	6	5/2016	Discharge from petroleum refineries; fire retardants; ceramics, electronics and solder
Arsenic <sup>1</sup> (ppb) AF # 1 AF # 2	NO	9.0 9.3 RAA		10	0	12/2015 12/2016	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Asbestos (MFL)	NO	<0.2		7	7		Decay of asbestos cement water mains; Erosion of natural deposits
Barium (ppm)	NO	0.041		2	2	5/2016	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Beryllium (ppb)	NO	<0.001		4	4	5/2016	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium (ppb)	NO	<0.5		5	5	5/2016	Corrosion of galvanized pipes; natural deposits; metal refineries; runoff from waste batteries and paints
Chromium (ppb)	NO	1.4		100	100	5/2016	Discharge from steel and pulp mills; Erosion of natural deposits
Cyanide (ppb)	NO	<25.0		200	200	5/2016	Discharge from steel/metal factories; Discharge from plastic and fertilizer factories
Fluoride (ppm)	NO	0.34		4	4	5/2016	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Mercury (ppb)	NO	<0.2		2	2	5/2016	Erosion of natural deposits; Discharge from refineries and factories; Runoff from landfills and cropland
Nitrate (ppm) AF # 1 AF #2	NO	2.9 2.6		10	10	5/2017	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite <sup>2</sup> (ppm)	NO	<0.05		1	1	5/2016	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	NO	<5.0		50	50	5/2013	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines
Sodium (ppm)	NO	51		N/A	N/A	5/2016	Erosion of natural deposits
Thallium (ppb)	NO	<1.0		2	0.5	5/2016	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

<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>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.

### Other Useful Data

Contaminant	Secondary Standard	Units	Level Detected/Range	Violation (Yes or No)	Sample Date	Likely Source
Calcium		ppm	51	N/A	10/2008	
Chloride		ppm	40	N/A	11/2007	
Potassium		ppm	1.4	N/A	9/2001	
Hardness total		ppm	210 168 212	N/A	9/2001 11/2007 10/2008	Water hardness is caused by the polyvalent metallic ions dissolved in water (principally Calcium & Magnesium) 0-75 Soft 75-150 Moderately Hard 150-300 Hard >300 Very Hard
Iron	0.3	ppm	0	N/A	9/2001	
Magnesium		ppm	20	N/A	10/2008	
Manganese	0.05		.001	N/A	9/2001	
pH	6.5 – 8.5	ppm	7.6	N/A	10/2008	
Sulfate	250	mg/l	77.2	N/A	10/2008	Levels in excess of 250 mg/L may have a laxative effect on user.
Total Dissolved Solids	500	mg/l	338	N/A	10/2008	Water in excess of 500 mg/l may have an unpalatable salty taste.
Zinc	5	ppm	0.02	N/A	9/2001	

### Violations

#### Calendar year 2017

Type/Description	Compliance Period
<p>Ash Fork Water Service had 2-violations to report for the calendar year 2017.</p> <ol style="list-style-type: none"> <li>2<sup>nd</sup> quarter Arsenic sample from EPDS #2 (AF#2) was not taken. The well house was under construction and no water could be produced. The sample could not be taken. (Violation unresolved) No water was produced from this source during calendar year 2017.</li> <li>April, May, June 2017 a Chlorine violation was documented. A MRDL Maximum Residual Disinfection Level report for the 2<sup>nd</sup> Quarter 2017 was submitted late. More than 30-days after the end of reporting period. (Violation Resolved)</li> </ol>	Calendar Year 2017

An explanation of the violation(s) in the above table, the steps taken to resolve the violation(s) and any required health effects information are required to be included with this report.

Water Vending Machines have similar regulations as other components of a water system. R18-4-216 of the Arizona Administrative Code states:

An owner of a water vending machine shall be responsible for the proper operation of each water vending machine. The owner shall do all of the following:

- Clean and maintain each water vending machine according to the manufacture recommendations.
- Retain maintenance and cleaning records for one year.
- Have analysis performed at least once every 6-months for total coliform bacteria. Results should be retained for one year. If a sample is positive for total coliform, the water vending machine shall be removed from service, and all components shall be cleaned, replaced or serviced. The water vending machine shall not be placed back into service until another total coliform bacteria analysis is preformed and the result is negative; and
- Maintain in operable condition all ultraviolet light, ozone or other disinfection components and automatic disabling capabilities built into the vending machine for use in the event of a disinfection system malfunction.

In accordance with these rules and the manufacture specifications, the Ash Fork Water Service has established the following service schedule.

- Water vending machines are inspected daily (5-days per week), cleaned weekly.
- Filter service intervals are every 12,000 gallons or 6-months, whichever comes first.
- Total coliform bacteria testing is preformed by the lab every 6-months.
- Ultraviolet lights are changed upon failure, or every 1-year