



# 2016 Annual Water Quality Report

Public Water System Name: FARMERS WATER CO.

Public Water System Numbers: 10048, 10049, 10213, 10414

We are pleased to present to all of our valued customers our Annual Water Quality Report for the year 2016, also known as the Consumer Confidence Report. We would like you to be informed about the quality of the water we deliver to your tap. We are committed to providing you with a safe and reliable supply of drinking water.

## General Information About Drinking Water

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.

In order to ensure that tap water is safe to drink, the United States Environmental Protection Agency (EPA) prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations establish limits for contaminants in bottled 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.

## Our Water Source

Farmers Water Co. pumps groundwater from several wells for the distribution of potable water at its 4 public water systems:

- PWS 10048 – Sahuarita
- PWS 10049 – Continental
- PWS 10213 – Santa Rita Springs
- PWS 10414 – Sahuarita Highlands

Each PWS has at least one well, storage tank, pressure tank, and distribution system. Because Farmers Water Co. pumps from the aquifer, minimal treatment is required. However, we do chlorinate the water at each of our storage tanks before it is delivered through our distribution system to ensure that the water delivered to our customers remains free of microbiological contamination. Farmers Water Co. takes seriously the potential for contamination and regularly monitors its systems.

## Protecting Our Water Source

Residents can help to protect water sources by taking hazardous household chemicals to hazardous material collection centers.

Please contact Farmers Water Co. at 520-879-7474 or visit our website at [www.farmerswaterco.com](http://www.farmerswaterco.com) to learn more about what you can do to help protect your drinking water sources, any questions about the Annual Water Quality Report, to learn more about our system, or to attend a scheduled public meeting. We want you, our valued customers, to be informed about the services we provide and the quality water we deliver to you every day.

## Contaminants That May Be Present 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 stormwater 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 stormwater 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 stormwater 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

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 EPA and CDC guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbiological contaminants call the EPA *Safe Drinking Water Hotline* at 1-800-426-4791.

## Source Water Assessment

The Source Water Assessment Report provides a screening-level evaluation of potential contamination that could occur. It does not mean that the contamination has or will occur. We can use this information to evaluate the need to improve our current water treatment capabilities and prepare for future contamination threats. This can help us ensure that quality water is delivered to your home. In addition, the source water assessment results provide a starting point for developing a source water protection plan.

Source Water Assessments on file with the Arizona Department of Environmental Quality (ADEQ) are available for public review at 1110 W. Washington St. Phoenix, AZ 85007 or you may request a copy at (602) 771-4641. For more information visit the ADEQ website at: [www.azdeq.gov/environ/water/dw/swap.html](http://www.azdeq.gov/environ/water/dw/swap.html)

Potential sources of contamination in our source water area come from leaching that occurs during the earth's natural filtering process or possible direct infiltration.

## Terms and Abbreviations

- **Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- **Treatment Technique (TT)** – A required process intended to reduce the level of a contaminant in drinking water.
- **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 Disinfectant 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 Disinfectant 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.
- **Parts per million (ppm) or Milligrams per liter (mg/L)** - one part per million corresponds to one minute in two years or a single penny in \$10,000.
- **Parts per billion (ppb) or Micrograms per liter (µg/L)**- one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

## EPA Lead Alert

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Farmers Water Co. is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. Lead usually enters from corrosion of household plumbing, pipes and fixtures that contain lead. 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. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the *Safe Drinking Water Hotline* at 1-800-426-4791 or at [www.epa.gov/safewater/lead](http://www.epa.gov/safewater/lead).

## Violations

During the month of October 2016 PWS 10-414 exceeded the action level for lead, which is 15 ppb. The analysis indicated that the 90<sup>th</sup> percentile was 27 ppb. Consumer notices of the lead monitoring results were provided to occupants at all the sites tested and a Public Education Notice was mailed to all PWS 10-414 customers in the first quarter of 2017. All subsequent sample results have been below the action level.



## Water Quality Data

Farmers Water Co. routinely monitors for contaminants in your drinking water according to Federal and State laws. The State of Arizona requires us to monitor for certain contaminants on a monthly, quarterly or annual basis and others 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.

**CONSUMER CONFIDENCE REPORT**  
Report Covers Calendar Year: January 1 – December 31, 2016

**Farmers Water Co.**  
**Water Quality Data**  
**PWS – 10-048 - Sahuarita**

Disinfectants	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Date	Major Source of Contaminant
Chlorine (ppm)	N	0.2	0.1 – 0.3	4	4	Monthly	Disinfection additive used to control microbes
Disinfection By-Products	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	N	42.0	0.0 – 0.034	80	N/A	6/15/2016	Byproduct of drinking water Chlorination
Total Halo-Acetic Acids (HAA5) (ppb)	N	2.2	0.0 – 2.2	60	N/A	6/15/2015	Byproduct of drinking water Chlorination
Lead & Copper	Violation	90 <sup>th</sup> Percentile <u>AND</u> Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Date	Major Source of Contaminant
Copper (ppm)	N	90 <sup>th</sup> Percentile = 0.093 0 over AL	0.0036 – 0.0990	1.3	1.3	9/23/2016	Corrosion of household plumbing, natural deposits
Lead (ppb)	N	90 <sup>th</sup> Percentile = 1.5 0 over AL	0 – 2.2	15	0	9/23/2016	Corrosion of household plumbing, natural deposits
Radionuclides	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Alpha emitters (pCi/L)	N	14.0 +/- 0.8	N/A	15	0	3/9/2015	Natural deposits
Inorganic Chemicals (IOC)	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Arsenic (ppb)	N	3.1	N/A	10	0	3/8/2016	Natural deposits, runoffs
Barium (ppm)	N	0.065	N/A	2	2	2/21/2012	Natural deposits, discharge of industrial
Fluoride (ppm)	N	0.3	N/A	4	4	2/21/2012	Natural deposits, discharge from fertilizer
Nitrate (ppm)	N	6.2	N/A	10	10	3/2/2016	Natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Sodium (ppm)	N	52.0	N/A	N/A	N/A	2/21/2012	Natural deposits, septic

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**Farmers Water Co.**  
**Water Quality Data**  
**PWS – 10-049, #1, Continental**

Disinfectants	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Date	Major Source of Contaminant
Chlorine (ppm)	N	0.2	0.1 – 0.4	4	4	Monthly	Disinfection additive used to control microbes
Disinfection By-Products	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	N	1.3	0 – 1.3	80	N/A	6/11/2013	Byproduct of drinking water Chlorination
Lead & Copper	Violation	90 <sup>th</sup> Percentile <u>AND</u> Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Month & Year	Major Source of Contaminant
Copper (ppm)	N	90 <sup>th</sup> Percentile = 0.049 0 over AL	0.0044 – 0.16	1.3	1.3	9/27/2013	Corrosion of household plumbing, natural deposits
Lead (ppb)	N	90 <sup>th</sup> Percentile = 0.7 0 over AL	0 – 1.3	15	0	9/27/2013	Corrosion of household plumbing, natural deposits
Radionuclides	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Major Source of Contaminant
Alpha emitters (pCi/L)	N	13.7 +/- 0.7	N/A	15	0	5/7/2015	Natural deposits
Inorganic Chemicals (IOC)	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Major Source of Contaminant
Arsenic (ppb)	N	5.0	N/A	10	0	3/8/2016	Natural deposits, runoffs
Barium (ppm)	N	0.068	N/A	2	2	2/21/2012	Natural deposits, discharge of industrial
Fluoride (ppm)	N	0.53	N/A	4	4	2/21/2012	Natural deposits, discharge from fertilizer
Nitrate (ppm)	N	8.1	N/A	10	10	3/2/2016	Natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Sodium (ppm)	N	55	N/A	N/A	N/A	2/21/2012	Natural deposits, septic

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**Farmers Water Co.**  
**Water Quality Data**  
**PWS – 10-049, #2, Madera Highlands**

Microbiological	Violation	Number of Samples Present	Absent (A) Present (P)	MCL	MCLG	Sample Date	Major Source of Contaminant
Total Coliform Bacteria	N	2	2 (P) 10 (A)	1 P/M	0	8/2016	Naturally Present in Environment
Disinfectants	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Date	Major Source of Contaminant
Chlorine (ppm)	N	0.2	0.1 – 0.4	4	4	Monthly	Disinfection additive used to control Microbes
Radionuclides	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Alpha emitters (pCi/L)	N	8.5 +/- 0.6	N/A	15	0	5/7/2015	Erosion of natural deposits
Inorganic Chemicals (IOC)	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Arsenic (ppb)	N	4.4	N/A	10	0	5/8/2016	Natural deposits, runoffs
Barium (ppm)	N	0.054	N/A	2	2	5/7/2015	Natural deposits, discharge of industrial
Fluoride (ppm)	N	0.46	N/A	4	4	5/7/2015	Natural deposits, discharge from fertilizer
Nitrate (ppm)	N	3.1	N/A	10	10	3/2/2016	Natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Sodium (ppm)	N	47	N/A	N/A	N/A	5/7/2015	Natural deposits, septic

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**Farmers Water Co.**  
**Water Quality Data**  
**PWS – 10-049, #3, Col. Real**

Disinfectants	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Date	Major Source of Contaminant
Chlorine (ppm)	N	0.2	0.1 – 0.4	4	4	Monthly	Disinfection additive used to control microbes
Disinfection By-Products	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	N	11.0	0 – 0.0080	80	N/A	6/15/2016	Byproduct of drinking water disinfection
Radionuclides	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Alpha emitters (pCi/L)	N	8.7 +/- 0.6	N/A	15	0	5/7/2015	Natural deposits
Inorganic Chemicals (IOC)	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Arsenic (ppb)	N	4.7	N/A	10	0	5/18/2016	Natural deposits, runoffs
Barium (ppm)	N	0.054	N/A	2	2	5/7/2015	Natural deposits, discharge from industrial
Fluoride (ppm)	N	0.46	N/A	4	4	5/7/2015	Natural deposits, discharge from fertilizer
Nitrate (ppm)	N	3.2	N/A	10	10	3/2/2016	Natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Sodium (ppm)	N	47	N/A	N/A	N/A	5/7/2015	Natural deposits, septic

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**Farmers Water Co.**  
**Water Quality Data**  
**PWS – 10-213 – Santa Rita Springs**

Disinfectants	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Date	Major Source of Contaminant
Chlorine (ppm)	N	0.3	0.1 – 0.8	4	4	Monthly	Disinfection additive used to control microbes
Disinfection By-Products	Violation	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	N	9.0	0.0 – 0.0068	80	N/A	6/15/2016	Byproduct of drinking water chlorination
Total Halo-Acetic Acids (HAA5) (ppb)	N	2.1	0.0 – 2.1	60	N/A	6/15/2016	Byproduct of drinking water chlorination
Lead & Copper	Violation	90 <sup>th</sup> Percentile <u>AND</u> Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Date	Major Source of Contaminant
Copper (ppm)	N	90 <sup>th</sup> Percentile = 0.19 0 over AL	0.007 – 0.38	1.3	1.3	9/22/2016	Corrosion of household plumbing, natural deposits
Lead (ppb)	N	90 <sup>th</sup> Percentile = 3.3 0 over AL	0 – 4.1	15	0	9/22/2016	Corrosion of household plumbing, natural deposits
Radionuclides	Violation	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Alpha emitters (pCi/L)	N	8.5 +/- 0.6	N/A	15	0	3/9/2015	Natural deposits
Inorganic Chemicals (IOC)	Violation	Running Annual Average (RAA) <u>OR</u> Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Arsenic (ppb)	N	7.0	N/A	10	0	3/8/2016	Natural deposits, runoff
Barium (ppm)	N	0.032	N/A	2	2	2/21/2012	Natural deposits, discharge of industrial
Fluoride (ppm)	N	0.48	N/A	4	4	2/21/2012	Natural deposits
Nitrate (ppm)	N	4.1	N/A	10	10	3/2/2016	Natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Sodium (ppm)	N	48	N/A	N/A	N/A	2/21/2012	Natural deposits, septic

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**Farmers Water Co.**  
**Water Quality Data**  
**PWS – 10-414 – Sahuarita Highlands**

Disinfectants	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MRDL	MRDLG	Sample Date	Major Source of Contaminant
Chlorine (ppm)	N	0.3	0.1 – 0.5	4	4	Monthly	Disinfection additive used to control microbes
Disinfection By-Products	Violation	Running Annual Average (RAA)	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Total Trihalomethanes (TTHM) (ppb)	N	6.3	0 – 6.0	80	N/A	6/15/2016	Byproduct of drinking water Chlorination
Lead & Copper	Violation	90 <sup>th</sup> Percentile AND Number of Samples Over the AL	Range of All Samples (L-H)	AL	ALG	Sample Date	Major Source of Contaminant
Copper (ppm)	N	90 <sup>th</sup> Percentile = 0.17 0 over AL	0.018 – 0.3	1.3	1.3	9/22/2016	Corrosion of household plumbing, natural deposits
Lead (ppb)	Y	90 <sup>th</sup> Percentile = 26.5 1 over AL	0 – 52.0	15	0	9/22/2016	Corrosion of household plumbing, natural deposits
Radionuclides	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Alpha emitters (pCi/L)	N	5.5 +/-0.5	N/A	15	0	8/1/2016	Natural deposits
Inorganic Chemicals (IOC)	Violation	Highest Level Detected	Range of All Samples (L-H)	MCL	MCLG	Sample Date	Major Source of Contaminant
Arsenic (ppb)	N	2.7	N/A	10	0	8/1/2016	Natural deposits, runoffs
Barium (ppm)	N	0.073	N/A	2	2	8/1/2016	Natural deposits, discharge of industrial
Fluoride (ppm)	N	0.20	N/A	4	4	8/1/2016	Natural deposits, discharge from fertilizer
Nitrate (ppm)	N	1.5	N/A	10	10	8/1/2016	Natural deposits, runoff from fertilizer, leaching from septic tanks, sewage
Sodium (ppm)	N	346	N/A	N/A	N/A	8/1/2016	Natural deposits, septic