

2018 WATER QUALITY REPORT

PWS 11-128

Spanish (Español): Este informe contiene información muy importante sobre la calidad de su agua potable. Por favor lea este informe o comuníquese con alguien que pueda traducir la información.



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Is my water safe?

We are pleased to present this year's Annual Water Quality Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). This report is designed to provide details about where your water comes from, what it contains, and how it compares to standards set by regulatory agencies. This report is a snapshot of last year's water quality. We are committed to providing you with information because informed customers are our best allies.

Do I need to take special precautions?

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. EPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the **Safe Water Drinking Information Hotline (800-426-4791)**.

Where does my water come from?

Groundwater is the sole source of water for PWS 11-128 and it is within the Phoenix Active Management Area.

Source water assessment and its availability

A Source Water Assessment is on file with the Arizona Department of Environmental Quality (ADEQ) and a copy of it can be obtained by contacting ADEQ's Record Center. The Source Water Assessment Report concluded with a low risk designation for our water system. We are continually observant of past, present and future land uses in and around our area and implement all reasonable measures which vigilantly safeguard our water supplies. Please contact us at (480) 987-9870 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.

Drinking water contaminants

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 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.

In order to ensure that tap water is safe to drink, the Arizona Department of Environmental Quality ("ADEQ") 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 that must provide the same protection for public health.



Why are there contaminants in my drinking water?

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 the Environmental Protection Agency's (EPA) **Safe Drinking Water Information Hotline (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: 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, which 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 by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems; and radioactive contaminants, which 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 that 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.

Description of Water Treatment Process

Your water is treated by disinfection. Disinfection involves the addition of chlorine or other disinfectant to kill dangerous bacteria and microorganisms that may be in the water. Disinfection is considered to be one of the major public health advances of the 20th century.

How can I get involved?

Your comments and suggestions are always welcome. Please contact Johnson Utilities with any questions, suggestions or comments at **(480) 987-9870** or **www.johnsonutilities.com**.

Source Water Protection Tips

Protection of drinking water is everyone's responsibility. You can help protect your community's drinking water source in several ways:

- ✓ Eliminate excess use of lawn and garden fertilizers and pesticides – they contain hazardous chemicals that can reach your drinking water source.
- ✓ Pick up after your pets.
- ✓ If you have your own septic system, properly maintain your system to reduce leaching to water sources or consider connecting to a public water system.
- ✓ Dispose of chemicals properly; take used motor oil to a recycling center.
- ✓ Volunteer in your community. Find a watershed or wellhead protection organization in your community and volunteer to help. If there are no active groups, consider starting one. Use EPA's Adopt Your Watershed to locate groups in your community, or visit the Watershed Information Network's How to Start a Watershed Team.
- ✓ Organize a storm drain stenciling project with your local government or water supplier. Stencil a message next to the street drain reminding people "Dump No Waste - Drains to River" or "Protect Your Water." Produce and distribute a flyer for households to remind residents that storm drains dump directly into your local water body.

Water Conservation Tips

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference – try one today and soon it will become second nature.

- ✓ Take short showers — a 5 minute shower uses 4 to 5 gallons of water compared to up to 50 gallons for a bath.
- ✓ Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons a month.
- ✓ Use a water-efficient showerhead. They're inexpensive, easy to install, and can save you up to 750 gallons a month.
- ✓ Run your clothes washer and dishwasher only when they are full. You can save up to 1,000 gallons a month.
- ✓ Water plants only when necessary.
- ✓ Fix leaky toilets and faucets. Faucet washers are inexpensive and take only a few minutes to replace. To check your toilet for a leak, place a few drops of food coloring in the tank and wait. If it seeps into the toilet bowl without flushing, you have a leak. Fixing it or replacing it with a new, more efficient model can save up to 1,000 gallons a month.
- ✓ Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- ✓ Teach your kids about water conservation to ensure a future generation that uses water wisely. Make it a family effort to reduce next month's water bill!
- ✓ Visit **www.epa.gov/watersense** for more information.

Additional Information for Lead

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Johnson Utilities 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. 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 or at <http://www.epa.gov/safewater/lead>.



Additional Information for Arsenic

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.

Additional Information for Nitrate

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 for advice from your health care provider.

Unit Descriptions

Term	Definition
ppm	parts per million, or milligrams per liter (mg/L)
ppb	parts per billion, or micrograms per liter (µg/L)
pCi/L	picocuries per liter (a measure of radioactivity)
NA	not applicable
ND	Not detected

Important Drinking Water Definitions

Term	Definition
MCLG	Maximum Contaminant Level Goal: 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.
MCL	Maximum Contaminant Level: 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.
TT	Treatment Technique: A required process intended to reduce the level of a contaminant in drinking water.
AL	Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
Variations and Exemptions	State or EPA permission not to meet an MCL or a treatment technique under certain conditions.
MRDLG	Maximum residual disinfection level goal. 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.
MRDL	Maximum residual disinfectant level. 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.
MNR	Monitored Not Regulated
MPL	State Assigned Maximum Permissible Level

Water Quality Data Table

In order to ensure that tap water is safe to drink, EPA prescribes regulations which limit the amount of contaminants in water provided by public water systems. The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. Although many more contaminants were tested, only those substances listed below were found in your water. All sources of drinking water contain some naturally occurring contaminants. At low levels, these substances are generally not harmful in our drinking water. Removing all contaminants would be extremely expensive, and in most cases, would not provide increased protection of public health. A few naturally occurring minerals may actually improve the taste of drinking water and have nutritional value at low levels. Unless otherwise noted, the

data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not vary significantly from year to year, or the system is not considered vulnerable to this type of contamination. As such, some of our data, though representative, may be more than one year old. In this table you will find terms and abbreviations that might not be familiar to you. To help you better understand these terms, we have provided the definitions below the table.

These tables show the results of our monitoring for the period of January 1 to December 31, 2018, unless otherwise noted.

Contaminants (units)	MCLG or MRDLG	MCL, TT, or MRDL	Highest Detect in your Water	Range (low - high)	Sample Date	Violation	Typical Source
Disinfectants & Disinfection By-Products*							
Chlorine (as Cl ₂) (ppm)	4	4.0	0.5	0.4 - 0.5	2018	No	Water additive used to control microbes
TTHMs [Total Trihalomethanes] (ppb)	NA	80	4.2 ¹	NA - 7.2	2018	No	By-product of drinking water disinfection
Haloacetic Acids (HAA5) (ppb)	NA	60	0.6 ¹	NA - 2.5	2018	No	By-product of drinking water disinfection
Inorganic Contaminants							
Arsenic (ppb)	0	10	5.8	2.6 - 5.8	2018	No	Erosion of natural deposits; Runoff from orchards
Barium (ppm)	2	2	0.042	0.032 - 0.042	2018	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	100	100	3.2	1.7 - 3.2	2018	No	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	4.0	4.0	1.3	0.21 - 1.3	2018	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate [measured as Nitrogen] (ppm)	10	10	9.79	0.83 - 9.79	2018	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Sodium (ppm)	NA	MNR	190	90 - 190	2018	No	Erosion of natural deposits; Leaching
Radioactive Contaminants							
Gross Alpha – Excluding Radon and Uranium (pCi/L)	0	15	12	ND - 12	2018	No	Erosion of natural deposits
Combined Radium (226/228) (pCi/L)	0	5	4.2	ND - 4.2	2018	No	Erosion of natural deposits
Uranium (ppb)	0	30	10	10 - 10	2016	No	Erosion of natural deposits

**There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants)*

¹All public water systems are required to monitor drinking water for specific contaminants on a regular basis and Johnson Utilities regularly monitors the water for over 50 regulated contaminants. Results of regular monitoring are an indicator of whether or not your drinking water meets health standards. During the 4th Quarter 2018 compliance period, we were required to sample for TTHMs and HAA5 disinfection by-products in November 2018 at four locations in our distribution system. We failed to monitor for these contaminants in November 2018 and as a result, we cannot be sure of the quality of our drinking water during this time period. Once the missed monitoring event was identified we collected the compliance samples in December 2018 and all results met state and federal water quality standards.

²Johnson Utilities collected nitrate samples during the first and third quarters of 2018 as required by safe drinking water regulations. The analytical results from these samples, as established by a state licensed laboratory, showed that the water met the required state and federal safe drinking water standard for this contaminant. However, some of the data were not reported to ADEQ by March 10, 2018, and January 10, 2019, as is required by rule. Johnson Utilities updated internal data review procedures to prevent any future late reporting of analytical results.

Contaminants (units)	MCLG	AL	Your Water	Sample Date	# Samples Exceeding AL	Exceeding AL	Typical Source
Inorganic Contaminants							
Copper - action level at consumer taps (ppm)	1.3	1.3	.097	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Inorganic Contaminants							
Lead - action level at consumer taps (ppb)	0	15	ND	2018	0	No	Corrosion of household plumbing systems; Erosion of natural deposits
Violations and Exceedances							

For more information contact:

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Water Conservation

Think you've done everything possible to save water but still looking for ways to do more? Are you a "gadget person" who likes to tinker with technology, from the simple to the complex? You might be surprised to learn that there's even more ways to save water by looking into new technologies. The Water – Use It Wisely Web site, www.wateruseitwisely.com has a listing of innovative technologies that can help you conserve water and ultimately save money.





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