



ANNUAL WATER QUALITY REPORT

REPORTING YEAR 2018

Presented By
**Far West Water
and Sewer Inc.**

Our Mission Continues

We are once again pleased to present our annual water quality report covering all testing performed between January 1 and December 31, 2018. Over the years, we have dedicated ourselves to producing drinking water that meets all state and federal standards. We continually strive to adopt new methods for delivering the best-quality drinking water to you. As new challenges to drinking water safety emerge, we remain vigilant in meeting the goals of source water protection, water conservation, and community education while continuing to serve the needs of all our water users.

Please remember that we are always available should you ever have any questions or concerns about your water.

Important Health Information

Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than 6 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as those with cancer undergoing chemotherapy, those who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants may be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. The U.S. EPA/

CDC (Centers for Disease Control and Prevention) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline at (800) 426-4791 or <http://water.epa.gov/drink/hotline>.



Water Treatment Process

The treatment process consists of a series of steps. First, raw water is drawn from our water source and sent through approximately six miles of pipe to get to our treatment facility. The water then goes into our header system where we add alum and cationic polymer to initiate the coagulation and flocculation process. The addition of these substances causes small particles to adhere to one another (called floc), making them large enough to catch in our filtration system, which enables us to remove the sediment in the next portion of the process. At this point, the water is filtered through layers of anthracite coal, coarse sand, and fine garnet. As the water passes through each layer, smaller and smaller suspended particles are removed, turbidity is removed, and clear water emerges.

Chlorine is added as a precaution against any bacteria that may still be present. (We carefully monitor the amount of chlorine, adding the lowest quantity necessary to protect the safety of your water.) Then water is pumped to sanitized reservoirs and stored until it is needed at your home or business.

Where Does My Water Come From?

Far West Water and Sewer, Inc., customers are fortunate, having water supply capabilities from two separate sources. The Far West Water Treatment Plant draws surface water from Canal A, which comes from the Colorado River. This is the primary water source. The secondary water source comes from the groundwater system. This fully compliant groundwater system is maintained on a regular basis and is ready for service in the event of an emergency or loss of surface water. Far West Water and Sewer, Inc., uses the groundwater system to augment water supplies when needed as well as annually, usually the first week of December, for approximately one week during the time that Canal A is shut down for cleaning and inspection by the Yuma Mesa Irrigation Drainage District.



Substances That Could Be in Water

To ensure that tap water is safe to drink, Arizona Department of Environmental Quality prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. U.S. Food and Drug Administration regulations establish limits for contaminants in bottled water. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk.

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, in some cases, radioactive material, and 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, or wildlife;

Inorganic Contaminants, such as salts and metals, which can be naturally occurring or may 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 may also come from gas stations, urban stormwater runoff, and septic systems;

Radioactive Contaminants, which can be naturally occurring or may be the result of oil and gas production and mining activities.

More information about contaminants in tap water and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at (800) 426-4791 or visit online at www.epa.gov/safewater/hotline. Information on bottled water can be obtained from the U.S. Food and Drug Administration.

Lead in Home Plumbing

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. We are responsible for providing high-quality drinking water, but we 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 at (800) 426-4791 or at www.epa.gov/safewater/lead.



We remain vigilant in delivering the best-quality drinking water

Testing For Cryptosporidium

Cryptosporidium is a microbial parasite found in surface water throughout the U.S. Although filtration removes *Cryptosporidium*, the most commonly used filtration methods cannot guarantee 100 percent removal. Far West Water and Sewer, Inc.'s main water supply was tested for *Cryptosporidium*. In 2007 the monitoring resulted in the discovery of only two organisms in the source water prior to treatment. Current test methods do not allow us to determine if the organisms are dead or if they are capable of causing disease. It should be noted that no known cases of this disease were attributed to water delivered by Far West Water and Sewer, Inc.

Symptoms of infection include nausea, diarrhea, and abdominal cramps. Most healthy individuals can overcome the disease within a few weeks. However, immunocompromised people are at greater risk of developing life-threatening illness. We encourage immunocompromised individuals to consult their doctors 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.

QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Bacilio Leon, Water Supervisor, at (928) 342-1238.



BY THE NUMBERS

The number of Olympic-sized swimming pools it would take to fill up all of Earth's water.

800
TRILLION

1¢ The average cost for about 5 gallons of water supplied to a home in the U.S.

The amount of Earth's water that is salty or otherwise undrinkable, or locked away and unavailable in ice caps and glaciers.

99%

50
GALLONS The average daily number of gallons of total home water use for each person in the U.S.

The amount of Earth's surface that's covered by water.

71%

330
MILLION The amount of water on Earth in cubic miles.

The amount of Earth's water that is available for all of humanity's needs.

1%

75% The amount of the human brain that contains water.

Table Talk

Get the most out of the Testing Results data table with this simple suggestion. In less than a minute, you will know all there is to know about your water:

For each substance listed, compare the value in the Amount Detected column against the value in the MCL (or AL, SMCL) column. If the Amount Detected value is smaller, your water meets the health and safety standards set for the substance.

Other Table Information Worth Noting

Verify that there were no violations of the state and/or federal standards in the Violation column. If there was a violation, you will see a detailed description of the event in this report.

If there is an ND or a less-than symbol (<), that means that the substance was not detected (i.e., below the detectable limits of the testing equipment).

The Range column displays the lowest and highest sample readings. If there is an NA showing, that means only a single sample was taken to test for the substance (assuming there is a reported value in the Amount Detected column).

If there is sufficient evidence to indicate from where the substance originates, it will be listed under Typical Source.



About Our Violations

During the 2nd and 3rd quarters of 2018, Far West exceeded the Maximum Contaminant Level (MCL) for Total Trihalomethanes (TTHMs) at one test site, Site 02-B. All other tests sites for TTHM's were in compliance. To prevent future exceedances from occurring, chlorine levels will be kept at a minimum, and ground water will be introduced continuously to this area. Along with those measures, a distribution system flushing program is being enforced weekly. Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

Far West failed to monitor for the presence of synthetic organic compounds (SOCs) at EPDS005 in the public drinking water system for the 4th quarter 2018. Far West also failed to sample for 2018 annual volatile organic compounds (VOCs) and nitrate for all five EPDS sites. Upon being notified of this sampling failure by the Environmental Protection Agency, we immediately analyzed our water supply for the missing samples. Test results have been received and properly recorded as required by state and federal law. Far West does not believe that missing this monitoring requirement had any impact on public health and safety since levels have been under MCL for previous sample periods. We have already taken the steps to ensure that adequate monitoring and reporting will be performed in the future so that this oversight will not be repeated.

Test Results

Our water is monitored for many different kinds of substances on a very strict sampling schedule. Also, the water we deliver must meet specific health standards. Here, we show only those substances that were detected in our water. (A complete list of all our analytical results is available upon request.) Remember that detecting a substance does not mean the water is unsafe to drink; our goal is to keep all detects below their respective maximum allowed levels.

The state recommends monitoring for certain substances less often than once per year because the concentrations of these substances do not change frequently. In these cases, the most recent sample data are included, along with the year in which the sample was taken.

REGULATED SUBSTANCES

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Arsenic (ppb)	2017	10	0	1.4	1.4–1.4	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2016	2	2	0.17	0.08–0.18	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Di(2-ethylhexyl) Adipate (ppb)	2017	400	400	0.59	0.59–0.59	No	Discharge from chemical factories
Di(2-ethylhexyl) Phthalate ¹ (ppb)	2018	6	0	0.59	0.58–0.68	No	Discharge from rubber and chemical factories
Haloacetic Acids [HAAs] (ppb)	2018	60	NA	26	14–26	No	By-product of drinking water disinfection
Nitrate (ppm)	2017	10	10	1.878	0.1–8.1	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
Nitrite (ppm)	2017	1	1	0.1	0.1–0.1	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2018	80	NA	110	62–110	Yes	By-product of drinking water disinfection
Turbidity ² (NTU)	2018	TT	NA	0.160	0.040–0.160	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2018	TT = 95% of samples meet the limit	NA	100	NA	No	Soil runoff

Tap water samples were collected for lead and copper analyses from sample sites throughout the community

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH %ILE)	SITES ABOVE AL/TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2016	1.3	1.3	0.019	0/29	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2016	15	0	4.3	1/29	No	Corrosion of household plumbing systems; Erosion of natural deposits

¹2018 required EPDS005 to be tested all 4 QTRs but was missed for a QTR.

²Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of the effectiveness of our filtration system.

There was a late monitoring for LT2 in June of 2018.

There was a late monitoring for SWTR in October and December 2018.

Definitions

90th %ile: The levels reported for lead and copper represent the 90th percentile of the total number of sites tested. The 90th percentile is equal to or greater than 90% of our lead and copper detections.

AL (Action level): The concentration of a contaminant that, if exceeded, triggers treatment or other requirements that a community water system shall follow.

LRAA (Locational Running Annual Average): The average of sample analytical results for samples taken at a particular monitoring location during the previous four calendar quarters. Amount Detected values for TTHMs and HAAs are reported as the highest LRAAs.

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.

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.

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.

MRDLG (Maximum Residual Disinfectant 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.

NA: Not applicable

NTU (Nephelometric Turbidity Units): Measurement of the clarity, or turbidity, of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

ppb (parts per billion): One part substance per billion parts water (or micrograms per liter).

ppm (parts per million): One part substance per million parts water (or milligrams per liter).

TT (Treatment Technique): A required process intended to reduce the level of a contaminant in drinking water.