PWS ID **AZ04-02014**

2016 Drinking Water Quality Report

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June 2017

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúscalo ó hable con alguien que lo entienda bien. Tambien puede obtenerse una copia en español llamando a (520) 417-7329. If you are a non-English speaking resident, we recommend that you speak with someone who understands the report.

We are pleased to present the Annual Drinking Water Quality Report for 2016. The Federal Safe Drinking Water Act requires that we issue an annual Consumer Confidence Report.

Drinking Water Source

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.

Douglas Water Source

The City of Douglas serves approximately 16,897 people. There are presently six (6) deep wells that produce high-quality water for public distribution in the City. Hydrologic studies have indicated that the water resources available are generous, with active recharge from the Mule, Dragoon, and Chiricahua mountain ranges. Water stored in the sand and gravel beds of the Douglas Basin Aquifer is adequate to supply our needs for years to come. The wells are widely separated to minimize the risk of any potential local contamination or naturally occurring quality problems. Each of the wells is individually tested to ensure compliance with all applicable standards and regulations. Not all wells are necessary to provide daily needs, but all are run periodically to keep them in operating condition. The average daily usage in our community in the winter time is 3.6 million gallons per day. Peak usage in our community in the summertime is approximately 5.9 million gallons per day. Each well has its own gas chlorination equipment which doses the water with one (1) part per million of chlorine gas to provide total protection from bacteria. The City of Douglas continues to work diligently to achieve compliance with all safe drinking water standards and regulations. On December 22, 2015 the Arizona Department of Environmental Quality (ADEQ) conducted an inspection of our Water Distribution System and the report confirmed that we are in full compliance. We continue in our commitment to provide high quality and safe drinking water to all City customers.

Drinking Water Contaminates

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, herbicides that may come from a variety of sources, i.e. 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 prescribes regulations limiting the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

Vulnerable Population

Drinking water, including bottled water, may be reasonably expected to contain at least small amounts of 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.

Source Water Assessment

The ADEQ conducted a source water assessment for our City water wells. The assessment included the review of adjacent land uses that may pose a potential risk to our water sources. These risks include, but are not limited to, underground storage tanks, gas stations, landfills, dry cleaners, and wastewater treatment plants. Once ADEQ identified the adjacent land uses, they were ranked as to their potential to affect the

water source. Due to the extensive regulations and guidelines for water quality testing, *drinking water in the United States is among the cleanest and safest in the world.* However, the quality varies over time due to changes in the water source from which it is drawn and the treatment it undergoes.Based on the information currently available on the hydrogeologic settings and the adjacent land uses that are in the specified proximity of the drinking water source(s) of this public water system, the ADEQ has given a high risk designation for the degree to which this public water system drinking water source(s) are protected. A designation of high risk indicates there may be additional source water protection measures which can be implemented on the local level. This does not imply that the source water is contaminated nor does it mean that contamination is imminent. Rather, it simply states that land use activities or hydrogeologic conditions exist that make the source water susceptible to possible future contamination. Residents can help protect this water source by practicing good septic system maintenance, taking hazardous household chemicals to hazardous material collection sites, and limiting pesticide and fertilizer use. A copy is available from ADEQ, 1110 W. Washington Street, Phoenix, Arizona, 85007, or an electronic copy can be requested from ADEQ at dml@azdeq.gov. Visit the ADEQ website at: www.azdeq.gov/environ/water, or contact the City of Douglas, Water Division Supervisor, David Gonzales, Public Works Department at 520-417-7329, or David.Gonzales@douglasaz.gov.

Definitions / Acronyms (for the City's Water System Contaminants Table)

AL-Action Level – the concentration of a contaminant which, if exceeded, triggers treatment or other requirements.
MCL-Maximum Contaminant Level – the "Maximum Allowed" is the highest level of a contaminant that is allowed in drinking water.
MCLG-Maximum Contaminant Level Goal – the "Goal" level of a contaminant in drinking water below which there is no known or expected risk to health.
MFL–Million Fibers per Liter.
MRDLG-Maximum Residual Disinfectant Level Goal.
MREM–Millirems per year – a measure of radiation absorbed by the body.
MRDL-Maximum Residual Disinfectant Level.
N/A–Not Applicable – sampling was not completed by regulation or was not required.
NTU = Nephelometric Turbidity Units – measure of water clarity.
PPM = Parts per million or mg/L Milligrams per million. ppm x 1000 = ppb
PPB = Parts per billion or µg/L Micrograms per liter. ppb x 1000 = ppt
PPT = Parts per trillion or Nanograms per liter. ppt x 1000 = ppq
PPQ = Parts per Quadrillion or Picograms per liter
PCi/L-Picocuries per liter – picocuries per liter is a measure of the radioactivity in water.
RAA-Running Annual Average – an average of monitoring results for the previous 12 calendar months.
TT-Treatment Technique – a treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

Health Effects Language

Nitrate in drinking water at levels above 10 ppm is a potential health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. 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 for advice from your health care provider.

If **Arsenic** is less than or equal to the MCL, your drinking water meets EPA's standard. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. EPA continue 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.

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. The City of Douglas 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 www.epa.gov/safewater/lead.

Water System Detected Contaminants

Microbiological	Violation Y or N	Number of Samples Present OR Highest Level Detected	Absent (A) or Present (P) OR Range of All Samples (L-H)	MCL	MCLG	Sample Month & Year	Likely Source of Contamination
Total Coliform Bacteria (System takes ≥ 20 monthly samples)	N	0	195	0	0	2016	Naturally Present in Environment
Disinfectants	**Violation Y or N**	**Running Annual Average (RAA)**	**Range of All Samples (L-H)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Chlorine (ppm)	N	0.5	0.5	MRDL = 4	MRDLG = 4	2016	Water additive used to control microbes

Disinfection By-Products	**Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (L-H)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Haloacetic Acids (HAA5) Stage II (ppb)	N	<0.0020	0 - <0.0020	60	n/a	2016	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) Stage II (ppb)	N	2.1	0 - 10.3	80	n/a	2016	Byproduct of drinking water disinfection
Lead & Copper	**Violation Y or N**	**90^{th} Percentile AND Number of Samples Over the AL**	**Range of All Samples (L-H)**	**AL**	**ALG**	**Sample Month & Year**	**Likely Source of Contamination**
Copper (ppm)	N	90^{th} Percentile = 0.060	0.021 – 0.079	AL = 1.3	ALG = 1.3	6/2016	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	90^{th} Percentile = 0	0	AL = 15	0	6/2016	Corrosion of household plumbing systems; erosion of natural deposits
Radionuclides	**Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (L-H)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Alpha emitters (pCi/L)	N	5.6	3.5 - 9.0	15	0	2016	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	N	0	0	5	0	2016	Erosion of natural deposits
Inorganic Chemicals (IOC)	**Violation Y or N**	**Running Annual Average (RAA) OR Highest Level Detected**	**Range of All Samples (L-H)**	**MCL**	**MCLG**	**Sample Month & Year**	**Likely Source of Contamination**
Arsenic (ppb)	N	3.4	1.5 - 7.1	10	0	6/2016	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Sodium (ppm)	N	130	61 - 130	7	7	6/2016	Erosion of natural deposits
Barium (ppm)	N	0.086	0.03 - 0.11	2	2	6/2016	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	1.6	0 - 5	100	100	6/2016	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	0.38	0.33 - 0.48	4	4	6/2016	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	1.30	0.99 – 1.68	10	10	6/2016	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	1.4	0 – 2.3	50	50	6/2016	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Requirements Not Met:

Violations
No Monitoring violations or over the MCL violations for 2016

Simple Steps to Save Water

Saving water around the home is simple and smart. The average household spends as much as $500 per year on its water and sewer bill but could save about $170 per year by retrofitting with water efficient fixtures and incorporating water saving practices.

Let WaterSense show you how to save water - and your wallet. How much money you save will depend on the cost of water where you live, but it makes sense that using less water lowers your utility bill. More importantly, using less water preserves this limited resource for generations to come.

Inside the Home

Get Flush With Savings

- Consider installing a WaterSense labeled toilet, which uses 20 percent less water while offering equal or superior performance. Compared to older, inefficient models, WaterSense labeled toilets could save a family of **four** more than $90 annually on its water utility bill, and $2,000 over the lifetime of the toilets.

Accessorize Your Faucet

- Installing a WaterSense labeled aerator is one of the most cost-effective ways to save water. Also, consider replacing the entire faucet with a WaterSense labeled model. Either way, you can increase the faucet's efficiency by 30 percent without sacrificing performance.

Outside the Home

Water When Needed

- Water your lawn or garden during the cool morning hours, as opposed to midday, to reduce evaporation.
- Look for sprinklers that produce droplets, not mist, or use soaker hoses or trickle irrigation for trees and shrubs.
- Set sprinklers to water lawns and gardens only. Check that you're not watering the street or sidewalk.

Helpline: (866) WTR-SENS (987-7367) Contact Us at Office of Water WaterSense, U.S. Environmental Protection Agency, Office of Wastewater Management (4204M), 1200 Pennsylvania Avenue, N.W. Washington, D.C. 20460

*(**WaterSense** is a U.S. Environmental Protection Agency program designed to encourage water efficiency in the U.S through the use of a special label on consumer products. It was launched in June, 2006.[1])*

City of Douglas		Important Telephone Numbers:	
Water & Sewer Utilities	*520-417-7334*	*Arizona Department of Environmental Quality (ADEQ),*	
Utility Billing	*520-417-7334*		*602-771-4641*
24-Hour Emergency Services	*520-417-7550*	*U.S. Environmental Protection Agency (EPA)*	*520-740-8261*
Public Works Department	*520-417-7329*	*Safe Drinking Water Hotline*	*1-800-426-4791*

In Addition to our regular contaminates EPA and ADEQ have requested we add the 2014 UCMR3 results to our CCR. On the following page you will find a brief explanation of what a UCMR is and why it is so important we monitor these contaminates once every three (3) years.

2014 UCMR3

Unregulated Contaminant Monitoring Rule (UCMR3) sampling and the Consumer Confidence Report (CCR):

The CCR rule, published on August 19, 1998 (63 FR 44511), requires community water systems (CWSs) to report unregulated contaminant monitoring results whenever they are detected (i.e., are reported above the Minimum Reporting Level [MRL]).

Unregulated Contaminant Monitoring Rule (UCMR3)

Unregulated contaminants are those that don't yet have a drinking water standard set by USEPA. The purpose of monitoring for these contaminants is to help USEPA decide whether the contaminants should have a standard.

UCMR3 Detected Contaminantes

Analyte	Highest Level Detected	Range of Results (L-H)	MRL	Units	Analyzed Date
Chromium	5.1	1.5 - 5.1	0.2	ug/L	3/2014 - 9/2014
Molybdenum	2.8	1.6 - 2.8	1	ug/L	3/2014 - 9/2014
Strontium	1300	110 - 1300	0.3	ug/L	3/2014 - 9/2014
Vanadium	16	3.4 - 16	0.2	ug/L	3/2014 - 9/2014
Chromium, Hexavalent	5.7	1.5 - 5.7	0.03	ug/L	3/2014 - 9/2014

For more information on UCMR3 Contaminants visit the UCMR3 Data Summary available at http://water.epa.gov/lawsregs/rulesregs/sdwa/ucmr/data.cfm#ucmr2013. The Data Summary includes health-based "reference concentrations" (along with explanatory discussion) for many of the UCMR3 contaminants. The reference concentrations were developed to provide context around the detection of particular UCMR contaminants or the American Water Works Association (AWWA) Fact Sheets (available at http://www.drinktap.org/home/water-information/water-quality/ucmr3.aspx) as an additional source of information for many of the UCMR3 contaminants.