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2015 Drinking Water Quality Report

City of Douglas Department of Public Works

June 2016

Este informe contiene información muy importante sobre el agua que usted bebe. Tradúscalo ó hable con alguien que lo entienda bien. También 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 2015. 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 16,921 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, Dagoon, 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. Total pumping capacity with all wells running is approximately 4,000 gallons per minute, or 3.4 million gallons per day. Peak usage in our community in the summertime is approximately 5.8 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)	Y	6	262	0	0	2015	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	.5	0.5 - 0.6	MRDL = 4	MRDLG = 4	2015	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	2015	Byproduct of drinking water disinfection
Total Trihalomethanes (TTHM) Stage II (ppb)	N	0.0026	0 – 0.0096	80	n/a	2015	Byproduct of drinking water disinfection
Lead & Copper	Violation Y or N	90th 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 = 0.08	0 - 0.1	AL = 1.3	ALG = 1.3	6/2013	Corrosion of household plumbing systems; erosion of natural deposits
Lead (ppb)	N	90 th Percentile = 0	0 - 0.001	AL = 15	0	6/2013	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	4.1	3.4 – 4.1	15	0	2015	Erosion of natural deposits
Combined Radium 226 & 228 (pCi/L)	N	.575	0 – 1.6	5	0	2014	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	3.6	0.0018 - 0.0071	10	0	6/2013	Erosion of natural deposits, runoff from orchards, runoff from glass and electronics production wastes
Sodium (ppm)	N	86	0 – 86	7	7	6/2015	Erosion of natural deposits
Barium (ppm)	N	0.075	0.03 – 0.10	2	2	6/2013	Discharge of drilling wastes; discharge from metal refineries; Erosion of natural deposits
Chromium (ppb)	N	4	0 – 6	100	100	6/2013	Discharge from steel and pulp mills; Erosion of natural deposits
Fluoride (ppm)	N	0.37	0.32 – 0.43	4	4	6/2013	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	N	1.33	1.01 – 1.55	10	10	6/2015	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium (ppb)	N	0.003	2 – 5	50	50	6/2013	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Requirements Not Met:

Violations

In November 2015, Six (6) positive samples were collected for Total Coliform. This triggered a Tier 2 Violation (Non Acute MCL). ADEQ's Total Coliform Rule requires re-samples to be collected within 24 hours. All re-samples results returned negative. Attach is a copy of the Thirty (30) day public notice that was posted to notify customers of the positive samples found on November 2015. In addition, due to the new Ground Water Rule which became effective December 1, 2009, a sample was collected at the four (4) Well sites which provided water to these locations and processed for one of three (3) fecal indicators: E coli, enterococci, or coliphage. All re-sample results returned negative.

Radionuclide and Volatile Organic Chemicals (VOC) were not taken on the first quarter of 2015 at Well No.17/POE017. Well was turned off for repair.



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

Water & Sewer Utilities 520-417-7334
Utility Billing 520-417-7334
24-Hour Emergency Services 520-417-7550
Public Works Department 520-417-7329

Important Telephone Numbers:

Arizona Department of Environmental Quality (ADEQ), 602-771-4641
U.S. Environmental Protection Agency (EPA) 520-740-8261
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	3/2015 - 9/2015
Molybdenum	2.8	1.6 - 2.8	1	ug/L	3/2015 - 9/2015
Strontium	1300	110 - 1300	0.3	ug/L	3/2015 - 9/2015
Vanadium	16	3.4 - 16	0.2	ug/L	3/2015 - 9/2015
Chromium, Hexavalent	5.7	1.5 - 5.7	0.03	ug/L	3/2015 - 9/2015

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.

On the following page is a copy of the 2015 public notice which was posted to notify our customers that a positive Total Coliform sample was collected and what action was taken



IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Tests Showed Coliform Bacteria in City of Douglas, PWS ID# 02014

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did to correct this situation.

We routinely monitor for drinking water contaminants. During the month of November 2015, we took twenty routine samples to test for the presence of coliform bacteria. Six (6) of these routine samples showed the presence of total coliform bacteria. Since the standard is that no more than one sample result per month may be positive for the presence of total coliforms, we are required to inform you of the fact by distributing this public notice.

What should I do?

- You do not need to boil your water or take other corrective actions. However, if you have specific health concerns, consult your doctor.
- People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers. General guidelines on ways to lessen the risk of infection by microbes are available from EPA's Safe Drinking Water Hotline at 1-800-426-4791.

What does this mean?

This is not an emergency. If it had been, you would have been notified immediately. Coliform bacteria are generally not harmful themselves. *Coliforms are bacteria which are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems.*

Usually, coliforms are a sign that there could be a problem with the system's treatment or distribution system (pipes). Weather conditions are also a big factor. Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or *E. coli*, are present. **We did not find any of these bacteria in our subsequent testing.**

What is being done?

The water system was flushed in the area where a presence of coliform was detected and chlorination was increased throughout the water distribution system. Under the **Total Coliform Rule** we are required to re-sample the locations where coliform was present within a 24 hour period. Where a *positive sample* was collected, *one (1) re-sample* was collected at the below location(s):

1. Original location
2. Upstream
3. Downstream

Under the **Ground Water Rule** we are also required to collect a sample at the Point of Entry (POE), "well head" to check for **E-coli**. A sample was collected at Four (4) POEs which supply water to these sites at the time positive samples were collected. **All sample results returned negative.**

For more information, please contact the City of Douglas at 425 10th Street or call 520-417-7329.

Please share this information with all other people who drink this water, especially those who may not have received this notice directly (for example, apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by the **City of Douglas**

State Water System ID#:02014

Date distributed: 11/18/2015

Any ADEQ translation or communication in a language other than English is unofficial and not binding on the State of Arizona. Cualquier traducción o comunicado de ADEQ en un idioma diferente al inglés no es oficial y no sujetará al Estado de Arizona a ninguna obligación jurídica.