

Presented By  
City of Yukon Operated by  
Veolia Water North America



ANNUAL  
WATER  
QUALITY  
REPORT

WATER TESTING PERFORMED IN 2015

## Meeting the Challenge

Once again we are proud to present our annual drinking water report, covering all drinking water testing performed between January 1 and December 31, 2015. 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 your homes and businesses. 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 of our water users.

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

## Important Health Information

While your drinking water meets U.S. EPA's standard for arsenic, it does contain low levels of arsenic. U.S. EPA's standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. U.S. 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.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised 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 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) guideline 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>.



## Where Does My Water Come From?

The City of Yukon customers are fortunate because we enjoy an abundant water supply from two sources. Our water sources are groundwater from Garber Wellington Aquifer and purchased water provided by Oklahoma City. The aquifer supplies an average of approximately 2.6 million gallons of groundwater per day to our residents. To meet the new arsenic regulations, Yukon water is blended with OKC Water before the entry point of Yukon. Depending on the month, 60 percent of the total water supply for Yukon is OKC Water. This process allows the City of Yukon to remain in compliance with federal regulations.

## Lead in Home Plumbing

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. We are 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/lead](http://www.epa.gov/lead).

## Community Participation

You are invited to participate in our public forum and voice your concerns about your drinking water. We meet the first and third Tuesday of each month beginning at 7:30 p.m. in the Centennial Building located at 12 South Fifth Street, Yukon, OK.

## Source Water Assessment

The City of Yukon and Veolia Water has conducted a Source Water Assessment and Protection Ground Water Sources Report which was submitted to the Oklahoma Department of Environmental Quality in 2002. The report indicated that the Qualitative Susceptibility Rating (QSR) was low. This report is on file with Veolia Water and may be reviewed at 501 West Wagner Road, Yukon, OK.





## Is tap water cheaper than soda?

Yes! You can refill an 8 oz. glass of tap water approximately 15,000 times for the same cost as a six-pack of soda pop. And, water has no sugar or caffeine.

## How long can a person go without water?

Although a person can live without food for more than a month, a person can only live without water for approximately one week.

## When was drinking water first regulated?

The Safe Drinking Water Act (SDWA) of 1974 represents the first time that public drinking water supplies were protected on a federal (national) level in the U.S. Amendments were made to the SDWA in 1986 and 1996.

## Seventy-one percent of Earth is covered in water: how much is drinkable?

Oceans hold about 96.5 percent of all Earth's water. Only three percent of the earth's water can be used as drinking water. Seventy-five percent of the world's fresh water is frozen in the polar ice caps.

## How much water do we use every day?

The average person in the U.S. uses 80 to 100 gallons of water each day. (During medieval times a person used only 5 gallons per day.) It takes 2 gallons to brush your teeth, 2 to 7 gallons to flush a toilet, and 25 to 50 gallons to take a shower.

## Failure in Flint

The national news coverage of water conditions in Flint, Michigan, has created a great deal of confusion and consternation over the past year. The water there has been described as being corrosive; images of corroded batteries and warning labels on bottles of acids come to mind. But is corrosive water bad?

Corrosive water can be defined as a condition of water quality that will dissolve metals (iron, lead, copper, etc.) from metallic plumbing at an excessive rate. There are a few contributing factors but, generally speaking, corrosive water has a pH of less than 7; the lower the pH, the more acidic, or corrosive, the water becomes. (By this definition, many natural waterways throughout the country can be described as corrosive.) While all plumbing will be somewhat affected over time by the water it carries, corrosive water will damage plumbing much more rapidly than water with low corrosivity.

By itself, corrosive water is not a health concern; your morning glass of orange juice is considerably more corrosive than the typical lake or river. What is of concern is that exposure in drinking water to elevated levels of the dissolved metals increases adverse health risks. And there lies the problem.

Public water systems are required to maintain their water at optimal conditions to prevent it from reaching corrosive levels. Rest assured that we routinely monitor our water to make sure that what happened in Flint never happens here. For more information on how corrosivity impacts water quality, download this informative pamphlet: <http://goo.gl/KpTmXv>.



## QUESTIONS?

For more information about this report, or for any questions relating to your drinking water, please call Gary Giddings, Project Manager, at (405) 354-6245. Veolia Water is located at 501 W. Wagner Rd in Yukon, OK 73099.

## Sampling Results

During the past year we have taken hundreds of water samples in order to determine the presence of any radioactive, biological, inorganic, volatile organic or synthetic organic contaminants. The table below shows only those contaminants that were detected in the water. The state requires us to monitor for certain substances less 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									
				Oklahoma City-Draper WTP		City of Yukon			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	MCL [MRDL]	MCLG [MRDLG]	AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	VIOLATION	TYPICAL SOURCE
Alpha Emitters (pCi/L)	2015	15	0	ND	NA	5.09	1.4–5.09	No	Erosion of natural deposits
Arsenic (ppb)	2013	10	0	ND	NA	6 <sup>1</sup>	0.0–9.8 <sup>1</sup>	No	Erosion of natural deposits; Runoff from orchards; Runoff from glass and electronics production wastes
Barium (ppm)	2013	2	2	0.057	0.032–0.057	0.181 <sup>2</sup>	0.181–0.181 <sup>2</sup>	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Beta/Photon Emitters <sup>3</sup> (pCi/L)	2015	50	0	2.611	2.611–2.611	2.13	2.04–2.13	No	Decay of natural and man-made deposits
Bromate (ppb)	2015	10	0	1.76	ND–24.8	NA	NA	No	By-product of drinking water disinfection
Chloramines (ppm)	2015	[4]	[4]	3.43	2.70–3.90	NA	NA	No	Water additive used to control microbes
Chlorine (ppm)	2015	[4]	[4]	NA	NA	2.0	1.00–2.0	No	Water additive used to control microbes
Combined Radium (pCi/L)	2015	5	0	ND	NA	NA	NA	No	Erosion of natural deposits
Fluoride (ppm)	2015	4	4	0.97	0.73–0.97	0.24	0.24–0.24	No	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Haloacetic Acids [HAA] (ppb)	2015	60	NA	53.23	20.10–63.90	21	20.2–21	No	By-product of drinking water disinfection
Nitrate (ppm)	2015	10	10	0.250	0.234–0.250	1.0	0.5–1.0	No	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits
TTHMs [Total Trihalomethanes] (ppb)	2015	80	NA	75.70	49.00–83.78	39	41.4–39	No	By-product of drinking water disinfection
Total Coliform Bacteria (# positive samples)	2015	1 positive monthly sample	0	0	NA	1	NA	No	Naturally present in the environment
Total Organic Carbon (ppm)	2015	TT	NA	0.391	0.391–0.391	NA	NA	No	Naturally present in the environment
Turbidity (NTU)	2015	TT	NA	0.15	ND–0.15	NA	NA	No	Soil runoff
Turbidity (Lowest monthly percent of samples meeting limit)	2015	TT = 95% of samples < 0.3 NTU	NA	100	NA	NA	NA	No	Soil runoff
Uranium (ppb)	2015	27	0	ND	NA	3.2	2.6–3.3	No	Erosion of natural deposits
Tap water samples were collected for lead and copper analyses from sample sites throughout the community									
				Oklahoma City-Draper WTP		City of Yukon			
SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	AL	MCLG	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	AMOUNT DETECTED (90TH%TILE)	SITES ABOVE AL/ TOTAL SITES	VIOLATION	TYPICAL SOURCE
Copper (ppm)	2015	1.3	1.3	0.079	0/100	0.0361	0/30	No	Corrosion of household plumbing systems; Erosion of natural deposits
Lead (ppb)	2015	15	0	ND	0/100	NA	NA	No	Corrosion of household plumbing systems; Erosion of natural deposits

## OTHER SUBSTANCES - OKLAHOMA CITY-DRAPER WTP

SUBSTANCE (UNIT OF MEASURE)	YEAR SAMPLED	Oklahoma City-Draper WTP		City of Yukon		TYPICAL SOURCE
		AMOUNT DETECTED	RANGE LOW-HIGH	AMOUNT DETECTED	RANGE LOW-HIGH	
<b>Chlorate</b> <sup>4</sup> (ppb)	2013	36.4	ND–36.4	NA	NA	By-product of drinking water disinfection, making of dyes, explosives, matches, printing fabrics, herbicides, antiseptics, toothpaste, and in paper pulp processing.
<b>Cryptosporidium</b> <sup>5</sup> (Units)	2015	ND	ND–0.075	NA	NA	Storm runoff, agriculture runoff, and leaking sewage systems.
<b>Hexavalent Chromium</b> <sup>4</sup> (ppb)	2013	0.141	ND–0.391	9.92 <sup>2</sup>	8.08–9.92 <sup>2</sup>	Naturally occurring; By-product of making steel and other alloys, plating, dyes and pigments, leather, and wood preservation.
<b>Molybdenum</b> <sup>4</sup> (ppb)	2013	2.76	ND–3.24	NA	NA	Naturally occurring; By-product of making steel and other alloys, lubricants, dyes, and pigments.
<b>Strontium</b> <sup>4</sup> (ppb)	2013	295	42.9–763	138 <sup>2</sup>	92.8–138 <sup>2</sup>	Naturally occurring; By-product of making electronics and fireworks.
<b>Total Chromium</b> <sup>4</sup> (ppb)	2013	0.428	ND–0.471	10.2 <sup>2</sup>	9.39–10.2 <sup>2</sup>	Naturally occurring; By-product of making steel and other alloys, plating, dyes and pigments, leather, and wood preservation.
<b>Vanadium</b> <sup>4</sup> (ppb)	2013	2.78	ND- 7.50	64.4 <sup>2</sup>	31.9–64.4 <sup>2</sup>	Naturally occurring; By-product of making steel alloys, chemical manufacturing, ceramics, and batteries.

<sup>1</sup> Sampled in 2015.

<sup>2</sup> Sampled in 2014.

<sup>3</sup> The MCL for beta particles is 4 mrem/year. U.S. EPA considers 50 pCi/L to be the level of concern for beta particles.

<sup>4</sup> UCMR3 Analyte.

<sup>5</sup> Long Term 2 Enhanced Surface Water Treatment Rule.

## Definitions

**AL (Action Level):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must 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 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

**ND (Not detected):** Indicates that the substance was not found by laboratory analysis.

**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.

**pCi/L (picocuries per liter):** A measure of radioactivity.

**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.