CITY OF HARRAH
2017 Water Quality Report

Annual Drinking Water Quality Report

We're pleased to present to you this year's Annual Water Quality Report. This report is designed to inform you about the quality of water and services we deliver to you every day. Our constant goal is to provide you with a safe and dependable supply of drinking water. Our water source is groundwater from Garber Wellington.

This report shows our water quality and what it means. If you have any questions about this report or concerning your water utility, please contact Jerry L. Chipman at 405-454-2951. The Association's address is P.O. Box 636, Harrah, Okla. 73045. We want our valued customers to be informed about their water utility.

City of Harrah routinely monitors for constituents in your drinking water according to Federal and state laws. The following table shows the results of our monitoring for the period of January 1st to December 31st, 2017 (Some of our data may be more than one year old because the state allows us to monitor for some contaminants less often than once per year.)

DEFINITIONS:

- *Maximum Contaminant Level* (MCL) - 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.
- *Maximum Contaminant Level Goal* (MCLG) - 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.
- *Treatment Technique (TT)* - A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.
- *Action Level* (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.
- *Parts per million (ppm) or Milligrams per liter (mg/l)* - one part of contaminant per million parts of water.
- *Parts per billion (ppb) or Micrograms per liter (ug/l)* - one part of contaminant per billion parts of water.
- *Nephelometric Turbidity Unit (NTU)* - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.
- *Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.
- *Non-Detects (ND)* – Laboratory analysis indicates that the constituent is not present.

MCLs are set at very stringent levels. To understand the possible health effects described for many regulated constituents, a person would have to drink 2 liters of water every day at the MCL level for a lifetime to have a one-in-a-million chance of having the described health effect.

All sources of drinking water are subject to potential contamination by constituents that are naturally occurring or are man-made. Those constituents can be microbes, organic or inorganic chemicals, or radioactive materials. All 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 the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline at 1-800-426-4791.

WATER QUALITY DATA

MICROBIOLOGICAL CONTAMINANTS

Substance	MCL	Maximum Level Detected	EPA MCLG (EPA Goal)	2017 Violations	Sources of Contaminant
Total Coliform Bacteria	We had no positive coliform samples.	28% of monthly samples	028% of monthly samples testing positive for coliform	No	Naturally present in the environment

Substance	MCL	Positive Samples in 2017	EPA MCLG (EPA Goal)	2017 Violations	Sources of Contaminant
Fecal Coliform Bacteria and E. Coli	0 samples testing positive for fecal coliform and E. Coli	0 samples	0 samples testing positive for fecal coliform and E. Coli	O	Human and animal fecal waste

RADIONUCLIDES

Substance	Collection Date	Highest Level Detected	Range Of Levels Detected	MCLG	MCL	Units	2017 Violations	Sources of Contaminant
Gross alpha Radon and Uranium	2017	16	0-27	0	15	pCi/L	Yes	Erosion of natural deposits.
Beta/Photon Emitters	2017	6.31	0-6.31	0	4	mrem/yr	None	Decay of natural And man-made deposits.
Combined Radium 226/ 228	2017	1.2	0-1.2	0	5	pCi/L	None	Erosion of natural deposits.
Uranium	2017	15	0-19.6	0	30	ug/l	None	Erosion of natural deposits.

INORGANIC CONTAMINANTS

Substance	Collection Date	Highest Level Detected	Range Of Levels Detected	MCLG	MCL	Units	2017 Violations	Sources of Contaminant
Barium	2017	0.27	0.145-0.27	2	2	ppm	None	Drilling waste, natural erosion.
Chromium	2017	15.1	6.2-15.1	100	100	ppb	None	Geology
Fluoride	8/23/06	0.175	0.1MG/L .26MG/L		0.1MG/L - .26 MG/L	MG\L	None	Erosion of natural deposits; water additive which promotes strong teeth
Nitrate(measured as Nitrogen)	2017	1	0.15-0.58	10	10	ppm	None	Runoff from fertilizer use, septic tanks or sewage; Erosion of natural.

Disinfectants and Disinfection By-Products	Date	High Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violations	Likely Source of Contamination
Chlorine	2017	2	1-2	MRDLG=4	MRDL=4	ppm	N	Water additive used to control microbes.
Total Trihalomethanes (TTHM)	2017	1.8	1.8-1.8	No goal for the total	80	ppb	N	By-products of drinking water disinfection.

Violations Table

Gross alpha excluding radon and uranium			
Certain minerals are radioactive and may emit a form of radioation known as alpha radiation. Some people who drink water containing alpha emitters in excess of the MCL over many have an increased risk of getting cancer.			
Violation Type	**Violation Begin**	**Violation End**	**Violation Explanation**
MCL, AVERAGE	1/1/2017	3/31/2017	Water samples showed that the amount of this contaminant in our drinking water was above its standard (called a maximum cintaminant level and abbreviated MCL) for the period indicated.

LEAD AND COPPER (Regulated at Customer Tap)

Substance	Action Level *	90% Sample Detected	2016 Violations	Sources of Contaminant
Lead	.015 ug/l	0.00mg/l	none	Corrosion of home water pipes
Copper	1.3 mg/l	0.0788 mg/l	none	Corrosion of home water pipes

** Action Level – 90% of samples must be below this level.*

* *

Total Coliform. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, bacteria may be present. No Coliforms were found in our samples .

Fecal coliform/E. Coli. Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, and people with severely compromised immune systems.

Turbidity. Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease-causing organisms. These organisms include bacteria, viruses, and parasites that can cause symptoms such as nausea, cramps, diarrhea, and associated headaches.

Copper. Copper is an essential nutrient, but some people who drink water containing copper in excess of the action level over a relatively short amount of time could experience gastrointestinal distress. Some people who drink water containing copper in excess of the action level over many years could suffer liver or kidney damage. People with

Wilson's Disease should consult their personal doctor.

Lead. Infants and children who drink water containing lead in excess of the action level could experience delays in their physical or mental development. Children could show slight deficits in attention span and learning abilities. Adults who drink this water over many years could develop kidney problems or high blood pressure.

* * *

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/CDC guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

In our continuing efforts to maintain a safe and dependable water supply it may be necessary to make improvements in your water system. The costs of these improvements may be reflected in the rate structure. Rate adjustments may be necessary in order to address these improvements. Please call our office if you have questions.

Annual Drinking Water Quality Report

CERTIFICATE OF COMPLETION

PWS Name: City of Harrah

PWS ID #: 2005506

The community water system indicated above hereby confirms that the Consumer Confidence Report has been distributed to customers (and appropriate notices of availability have been given) in accordance with 40 CFR 141.155. Further, the system certifies that the information contained in the report is correct and consistent with the compliance monitoring data previously submitted to the primacy agency.

Certified by:

Name: Jerry L. Chipman

Title: Deputy Public Works Director

Phone: 405-454-2951 *Date:* 7/9/18

RETURN a copy of your *Consumer Confidence Report*
and the signed *Certificate of Completion and Distribution*
To the following address:

Consumer Confidence Reports
Water Quality Division
Department of the Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73101-1677