

2015

Annual Drinking Water Quality Report

Rural Water District #5 Wagoner County

We're very pleased to provide you with this year's Annual Quality Water Report (Consumer Confidence Report) as required by the Safe Drinking Water Act (SDWA). We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water. Our water source is surface water drawn from the Verdigris River located 4½ miles east of Coweta. We also purchased water from Wagoner County Rural Water #4. 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 Denette Hughes at 918-486-5458. We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our monthly Board Meetings. They are held on the first Tuesday night of each month at 7:00 p.m. in our office building located at 15078 South 305TH East Avenue in Coweta.

Rural Water District #5 routinely monitors for contaminants in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1st to December 31st, 2015. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. It is important to remember that the presence of these contaminants does not necessarily pose a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

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 including: Microbial Contaminants-viruses and bacteria, that may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife. Inorganic Contaminants-salts and metals which can be naturally occurring or result from urban storm water runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming. Pesticides and Herbicides-comes from a variety of sources such as agriculture, urban storm water runoff, and residential uses. Organic Chemical Contaminants-includes synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff, and septic systems. Radioactive Contaminants-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 EPA prescribes regulations that limit the amount of certain contaminants in the water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

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 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 microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

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 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 <http://www.epa.gov/safewater/lead>.

The table below lists all of the drinking water contaminants we detected for the calendar year report. 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 a year. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the date presented in the table is from the testing done in the calendar year of the report. In the table below you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we have provided the definitions below the table. We have a source water protection plan available in our office that provides more information such as potential sources of contamination.

Rural Water District No. 5 Wagoner County

Annual Water Quality Data Table 2015

The table below lists all of the drinking water contaminants that we detected during the calendar year of this report. The presence of contaminants in the water does not necessarily indicate that the water poses a health risk. Unless otherwise noted, the data presented in this table is from testing done in the calendar year of the report. The EPA or the State requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently.

Inorganic Contaminants							
Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation Y/N	Likely Source of Contamination
Barium (ppm)	2013	0.0457	0.0457 - 0.0457	2	2	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits.
Fluoride (ppm)	2013	0.2	0.2 – 0.2	4	4.0	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories.
Disinfectants and Disinfection By-Products							
Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation Y/N	Likely Source of Contamination
Chlorine (ppm)	2015	1	0 – 1	MRDLG = 4	MRDL = 4	N	Water additive used to control microbes.
Chlorite (ppm)	2015	0.624	0.195 – 0.624	0.8	1	N	By-product of drinking water disinfection.
Haloacetic Acids (HAA5) (ppb)	2015	32	15.1 – 51.4	No goal for the total	60	N	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM) (ppb)	2015	47	24.8 – 64.4	No goal for the total	80	N	By-product of drinking water disinfection.

**Rural Water District No. 5 Wagoner County
(continued)**

Radioactive Contaminants							
Contaminant	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Violation Y/N	Likely Source of Contamination
Beta/photon emitters (mrem/yr)	8/23/2011	4.554	4.554 – 4.554	0	4	N	Decay of natural and Man-made deposits.
Combined Radium 226/228 (pCi/L)	8/23/2011	0.493	0.493 – 0.493	0	5	N	Erosion of natural deposits.

Lead and Copper						
Contaminant	Date Sampled	MCLG	Action Level (AL)	90 th Percentile	Violation Y/N	Likely Source of Contamination
Copper (ppm)	2014	1.3	1.3	0.244	N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Turbidity				
	Limit (Treatment Technique)	Level Detected	Violation Y/N	Like Source of Contamination
Highest Single measurement (NTU)	1 NTU	1.58 NTU	Y	Soil runoff
Lowest monthly % meeting limit (NTU)	0.3 NTU	99%	N	Soil runoff

Information Statement: Turbidity is a measurement of the cloudiness of the water caused by suspended particles. We monitor it because it is a good indicator of water quality and the effectiveness of our filtration system and disinfectants.

Total Organic Carbon – The percentage of Total Organic Carbon (TOC) removal was measured each month and the system met all TOC removal requirements set, unless a TOC violation is noted in the violations section.

**Rural Water District No. 5 Wagoner County
(continued)**

Violation Table

Interim Enhanced SWTR			
The Interim Enhanced Surface Water Treatment Rule improves control of microbial contaminants, particularly Cryptosporidium, in systems using surface water, or ground water under the direct influence of surface water. The rule builds upon the treatment technique requirements of the Surface Water Treatment Rule.			
Violation Type	Violation Begins	Violation Ends	Violation Explanation
Single Comb FLTR Effluent (IESWTR/LT1)	05/01/2015	05/31/2015	One turbidity measurement exceeded a standard for the month indicated. Turbidity (cloudiness) levels are used to measure effective filtration of drinking water.

For more information contact
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Wagoner County Rural Water District #4
Annual Water Quality Data Table 2014

Disinfectants and Disinfectant By-Products							
Contaminant	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range Low/High	Sample Date	Violation	Typical Source
Haloacetic Acids (HAA5) (ppb)	NA	60	35	17.2 -56.9	2015	N	By-product of drinking water chlorination
Chlorine (as Cl ₂) (ppm)	4	4	1	1 – 1	2015	N	Water additive used to control microbes
TTHMs (Total Trihalomethanes) (ppb)	NA	80	NA	44.2 -121	2015	Y	By-product of drinking water disinfection
Total Organic Carbon (% Removal)	NA	TT	NA	NA	2015	N	Naturally present in the environment

Inorganic Contaminants							
Contaminant	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range Low/High	Sample Date	Violation	Typical Source
Barium (ppm)	2	2	0.0481	NA	2013	N	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride (ppm)	4	4	0.25	NA	2013	N	Erosion of natural deposits; Water additive which promotes strong teeth; Discharge from fertilizer and aluminum factories
Nitrate (measured as Nitrogen) (ppm)	10	10	.26	NA	2015	N	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Microbiological Contaminants							
Contaminant	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range Low/high	Sample Date	Violation	Typical Source
Turbidity (NTU)	NA	0.3	97	NA	2015	N	Soil Runoff

97% of the samples were below the TT value of .3. A value less than 95% constitutes a TT violation. The highest single measurement was .29. Any measurement in excess of 1 is a violation unless otherwise approved by the state.

**Wagoner County Rural Water District #4
(continued)**

Radioactive Contaminants							
Contaminant	MCLG or MRDLG	MCL, TT or MRDL	Your Water	Range Low/High	Sample Date	Violation	Typical Source
Beta/photon Emitters (pCi/L)	0	50	4.651	NA	2011	N	Decay of natural and manmade deposits

Inorganic Contaminants							
Contaminant	MCLG	AA	Your Water	Sample Date	# Samples Exceeding AL	Exceeds AL	Typical Source
Copper-action level at consumer taps (ppm)	1.3	1.3	1.18	2015	1	N	Corrosion of household plumbing systems; Erosion of natural deposits
Lead-action level at consumer taps (ppb)	0	15	0	2015	1	N	Corrosion of household plumbing systems; Erosion of natural deposits

Violations and Exceedances	
<p>Beta/photon emitters Certain minerals are radioactive and may emit forms of radiation known as photons and beta radiation. Some people who drink water containing beta and photon emitters in excess of the MCL over many years may have an increased risk of getting cancer. EPA considers 50 pCi/l to be the level of concern for beta particles.</p>	
<p>TTHMs (Total Trihalomethanes) 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 system, and may have an increased risk of getting cancer. The violation occurred as a running average from January 2015 through December 2015. Correction included increased flushing of the lines, adjusting the chemical dosing and correcting the mechanical issue which brought the levels back into compliance, per the test results for the first quarter of 2016.</p>	

Abbreviations and Definitions

AL (Action Level)

The concentration of a contaminant that, if exceeded triggers treatment or other requirements that a system must follow.

MCL (Maximum Contaminant Level)

The highest level of a contaminant 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 the 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)

NR (Monitoring not required, but recommended)

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.

Parts per million (ppm) or milligrams per liter (mgpl)

One part substance per million parts water.

Parts per billion (ppb) or micrograms per liter (UG/L)

One part substance per billion parts water.

pCi/L (pico curies per liter)

A measure of radioactivity.

TT (Treatment technique)

A required process intended to reduce the level of a contaminant in drinking water.

Mrem/yr (Millograms per year)

A measure of radiation absorbed by the body

SU (Standard Units)

LRAA (Locational Running Annual Average)

Average

LT2ESWTR

Long Term 2 Enhanced Surface Water Treatment Rule

Stage 2 DBPR

Stage 2 Disinfection By-Product Rule

UCMR2

Unregulated Contaminants Monitoring Rule 2

MNR (Monitored not regulated)

MPL (State assigned Maximum Permissible Level)