2023 Annual Drinking Water Quality Report

Pottawatomie Co. RWD #3 (Dale Plant)

PWS ID: 061020808

Distributed June, 2024

This is the Annual Water Quality Report for the period of January 1 to December 31, 2023.

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This report is intended to provide you with important information about your drinking water and the efforts made by the water system to provide safe drinking water.

Why Are There Contaminants in My Drinking Water?

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.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessary indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPAs Safe Drinking Water Hotline at (800) 426-4791.

The Pottawatomie Co. RWS #3 Dale Plant Water System gets its water from 8 groundwater wells that gets water from an aquifer underground. The water is disinfected using hypochlorite to ensure it is safe for consumption before being dispatched to the distribution system for your consumption. Contaminants that may be present in source water include:

- Microbial contaminants, such as viruses and bacteria, which 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 storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
- Organic chemical contaminants, including 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, which 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 which limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water which must provide the same protection for public health. Contaminants may be found in drinking water that may cause taste, color, or odor problems. These types of problems are not necessarily causes for health concerns. For more information on taste, odor, or color of drinking water, please contact the system's business office.

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

Source Water Assessment and Its Availability

All Public Water Systems must undergo a Source Water Assessment (SWA) to determine susceptibility of the active water sources to potential sources of contamination. This assessment is revised and updated as new water sources are activated, as old water sources are inactivated, and as new potential sources of contamination (PSOCs) are discovered or removed from within a quarter mile radius of the active water source. The 1996 Amendments to the Safe Drinking Water Act Authorizes a Source Water Assessment Program to determine the susceptibility of a public drinking water supply to contamination. Sources of contaminants are required to be inventoried during the assessment process. An assessment was done for our water system on May 8, 2008, by EPA Region 6. Based on that assessment, the overall susceptibility rating for our system was rated as being Low. A copy of this report is available at the utility office for your review. Please contact your water system for more information on this.

Additional Information for 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. 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 minimize exposure is available from the Safe Drinking Water Hotline or at http://www.epa.gov/safewater/lead.

2023 Regulated Contaminants Detected

Lead and Copper

Definitions:

- Action Level Goal (ALG): The level of a contaminant in drinking water below which there is no known or expected risk to health. ALGs allow for a margin of safety.
- Action Level (AL): The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Lead and Copper	Date Sampled	MCLG	Action Level (AL)	90th Percentile	# Sites Over AL	Units	Violation	Likely Source of Contamination
Copper	Jan – June 2023 July – Dec 2023	1.3 1.3	1.3 1.3	0.0855 0.343	0 0	ppm ppm	N N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.
Lead	Jan – June 2023 July – Dec 2023	0 0	15 15	ND ND	0 0	ppm ppm	N N	Erosion of natural deposits; Leaching from wood preservatives; Corrosion of household plumbing systems.

Water Quality Test Results

The following tables contain scientific terms and measures, some of which may require explanation:

Avg: Regulatory compliance with some MCLs is based on running annual average of monthly samples.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

Level 2 Assessment: A Level 2 assessment is a very detailed study of the water system to identify potential problems and determine (if possible) why an E. coli MCL violation has occurred and/or why total coliform bacteria have been found in our water system on multiple occasions.

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.
Maximum residual disinfectant level goal (MRDLG):	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.
ppb:	Micrograms per liter (Ug/L) or parts per billion – or one ounce in 7,350,000 gallons of water.
ppm:	Milligrams per liter (mg/L) or parts per million – or one ounce in 7,350 gallons of water.
Treatment Technique (TT):	A required process intended to reduce the level of a contaminant in drinking water.
pCi/L:	Picocuries per liter (a measure of radioactivity)
ND:	Not detected
NR:	Monitoring not required but recommended
90^{th} Percentile:	A value at which 90% of all samples collected tested at or below this value.
Variances and Exemptions:	State of EPA permission not to meet an MCL or a treatment technique under certain conditions.

2023 Regulated Contaminants Detected

Disinfectants and Disinfection By-Products

Disinfectants and Disinfection By-Products	Collection Date	Highest level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Chlorine	2023	0.294 AVG	0.22 - 0.55	4.0	4.0	mg/L	No	Water additive used to control microbes.
Haloacetic Acids (HAA5)	2023	2.91	2.91	No goal for the total	60	ppb	No	By-product of drinking water disinfection.
Total Trihalomethanes (TTHM)	2023	42.9	42.9 - 42.9	No goal for the total	80	ppb	No	By-product of drinking water disinfection.

Inorganic Contaminants

Inorganic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Barium	2023	0.103	0.054 – 0.103	2	2	ppm	No	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
Fluoride	2023	0.74	0.51-0.74	4	4.0	ppm	No	Erosion of natural deposits; Water additive which promotes strong teeth: Discharge from fertilizer and aluminum factories.

Radioactive Contaminants

Radioactive Contaminants	Collection Date	Highest Levels Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Beta/photon emitters	2023	2.02	2.02 – 2.02	0	50	pCi/L	No	Decay of natural and man-made deposits.

Combined Radium 226 & 228	2023	1.499	1.499 – 1.499	0	5	pCi/L	No	Erosion of natural deposits.
Gross alpha excluding radon and uranium	2023	3.74	3.74 – 3.74	0	15	pCi/L	No	Erosion of natural deposits.
Uranium	2023	4.47	4.47 – 4.47	0	30	ug/L	No	Erosion of natural deposits.

Volatile Organic Contaminants

Volatile Organic Contaminants	Collection Date	Highest Level Detected	Range of Levels Detected	MCLG	MCL	Units	Violation	Likely Source of Contamination
Dichloromethane	2023	1.99	0 - 1.99	0	5	ppb	N	Discharge from pharmaceutical and chemical factories.

EPA's Unregulated Contaminant Monitoring Rule 5 (UCMR 5)

As required by the U.S. Environmental Protection Agency (EPA), our water system sampled for a series of unregulated contaminants under the EPA's Unregulated Contaminant Monitoring Rule 5 (UCMR 5) in 2023. Unregulated contaminants are those that do not yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide whether the contaminants should have a public health protection standard.

For the Pottawatomie Co. RWD #3 (Dale Plant) (061020808) the analyte lithium was detected and the results ranged from 15 to 20 µg/L with an average lithium result of 17.5 µg/L. For more information regarding lithium in drinking water, please see the following resources at https://www.epa.gov/dwucmr/fifth-unregulated-contaminant-monitoring-rule#lithium.

Our system also had a detect for PFHxS of 0.0033 µg/L (Range: 0.0033 - 0.033 µg/L, and average of 0.0033 µg/L) and a detect for PFOS of 0.0041 µg/L (Range 0.0041 – 0.0041 µg/L, and average of 0.0041 µg/L). For more information on Per- and Polyfluoroalkyl Substances please visit https://www.epa.gov/pfas.

For additional information on the unregulated contaminants we sampled for, please visit the following website regarding the UCMR 5 Occurrence Data at https://www.epa.gov/dwucmr/occurrence-data-unregulated-contaminant-monitoring-rule#5

Violations Table

Cyanide			
Some people who drink water containing cyanide well in excess of the MCL over many years could experience nerve damage or problems with their thyroid.			
Violation Type	Violation Begin	Violation End	Violation Explanation
MONITORING, ROUTINE MINOR	01/01/2023	03/31/2023	The lab did not run the test as requested. When the test was completed, cyanide was not detected. However, it was one (1) month late.