

*Annual Drinking Water Quality Report*  
*City of Moulton*  
*April 2024*

We're pleased to present to you this year's Annual Quality Water Report. This report is designed to inform you about the water quality and services we deliver to you every day. Our constant goal is to provide you with a dependable supply of drinking water. We want you to understand the efforts we make to continually improve the water treatment process and protect our water resources. We are committed to ensuring the quality of your water. Our water source is surface water from the Sinking Creek and Turkey Creek Reservoir, which is processed at our treatment plant in Lawrence County. We also purchased water from West Morgan East Lawrence Water Authority. Their water source is surface water from the Wheeler Lake Reservoir on the Tennessee River, which is processed at the J.D. Sims – R.M. Hames Water Treatment Facility, located at Lock A, near Hillsboro in Lawrence County.

**We are pleased to report that our drinking water meets all federal and state requirements.**

If you have any questions about this report or concerning your water utility, please contact our Water Treatment Plant Superintendent at (256)974-1996. **The CCR is available anytime on the city's website [www.cityofmoulton.com](http://www.cityofmoulton.com).** We want our valued customers to be informed about their water utility. If you want to learn more, please attend any of our regularly scheduled meetings. **The City Council Meetings for the City of Moulton are held the First and Third Monday of each month at 5:00 p.m. at our business office at 720 Seminary St. in Moulton.** Our current City Council Members are: Mayor Rodger Weatherwax, Jason White, Brent White, Joyce Jeffreys, Denise Lovett, and Cassandra Lee.

The City of Moulton Waterworks System routinely monitors for constituents in your drinking water according to Federal and State laws. This table shows the results of our monitoring for the period of January 1<sup>st</sup> to December 31<sup>st</sup>, 2023. All drinking water, including bottled drinking water, may be reasonably expected to contain at least small amounts of some constituents. **It's important to remember that the presence of these constituents does not necessarily pose a health risk.**

In this table you will find many terms and abbreviations you might not be familiar with. To help you better understand these terms we've provided the following definitions:

*Non-Detects (ND)* - laboratory analysis indicates that the constituent is not present.

*Parts per million (ppm) or Milligrams per liter (mg/l)* - one part per million corresponds to one minute in two years or a single penny in \$10,000.

*Parts per billion (ppb) or Micrograms per liter* - one part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

*Parts per trillion (ppt) or Nanograms per liter (nanograms/l)* - one part per trillion corresponds to one minute in 2,000,000 years, or a single penny in \$10,000,000,000.

*Parts per quadrillion (ppq) or Picograms per liter (picograms/l)* - one part per quadrillion corresponds to one minute in 2,000,000,000 years or one penny in \$10,000,000,000,000.

*Picocuries per liter (pCi/L)* - picocuries per liter is a measure of the radioactivity in water.

*Millirems per year (mrem/yr)* - measure of radiation absorbed by the body.

*Million Fibers per Liter (MFL)* - million fibers per liter is a measure of the presence of asbestos fibers that are longer than 10 micrometers.

*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.

*Action Level* - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

*Treatment Technique (TT)* - (mandatory language) A treatment technique is a required process intended to reduce the level of a contaminant in drinking water.

*Maximum Contaminant Level* - (mandatory language) The "Maximum Allowed" (MCL) is 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* - (mandatory language) The "Goal"(MCLG) is 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 – (MRDL)* Maximum chlorine residual allowed based on an annual average of all sampling points.

*Minimum Detect Level – (MDL)* Lowest level at which containment can be detected.

## Violations

The violation reported below is the same violation that was on last years CCR. It was mistakenly put on last year's CCR but should have been for the 2024 CCR. We did not receive the same violation for each year.

Moulton Water Works incurred a chlorite reporting violation. The noncompliance resulted from a failure to submit the Oct. 2022 - Dec. 2022 results by Jan. 10, 2023.

Adem Administration Code r.335-7-2-.20 (1)(a) states, " the supplier of water shall report to the department the results of any test, measurment or analysis within the first 10 days following the month in which the result is received or the first 10 days following the end of the required monitoring period as stipulated by the department, whichever is shortest."

The chlorite test results were in compliance but the lab that does the testing failed to send in the results to ADEM by the January 10th deadline. This violation does not affect the quaility of our drinking water.

Note: Our lead and copper sampling were conducted in August 2022, with NO sites exceeding the action level.

The results and the action levels are shown in the following charts.

ND = Non Detected

<b>Table of Primary Contaminants</b>					
At high levels some primary contaminants are known to pose a health risks to humans. This table provides a quick glance of any primary contaminant detections for the year of 2023.					
CONTAMINANT	MCL	AMOUNT DETECTED	CONTAMINANT	MCL	AMOUNT DETECTED
<b>Bacteriological</b>			Gamma-BHC	0.0002	ND
Total Coliform Bacteria	< 5%	0	Glyphosate	0.7	ND
Turbidity	TT	0.216	Haloacetic Acids	60	37
<b>Radiological</b>			Heptachlor	0.0004	ND
Beta/photon emitters (mrem/yr)	4	<2.0	Heptachlor epoxide	0.0002	ND
Alpha Gross (pci/l)	15	0.0+/-0.9	Hexachlorobenzene	0.001	ND
Radium 228(pci/l)	5	0.0+/-0.4	Hexachloropentadiene	0.05	ND
<b>Inorganic</b>			Methoxychlor	0.04	ND
Antimony (mg/l)	0.006	<0.000500	Oxamyl	0.2	ND
Arsenic (mg/l)	0.01	<0.000500	PCBs	0.0005	ND
Asbestos (MFL)	7	N/A	Pentachlorophenol	0.001	ND
Barium (mg/l)	2	0.0162	Propachlor	0.5	ND
Beryllium mg/l)	0.004	<0.000500	Simazine	0.004	ND
Cadmium (mg/l)	0.005	<0.000500	Toxaphene	0.003	ND
Chromium (mg/l)	0.1	<0.000500	TTHM	80	34
Copper (ppm)	1	0.178	1,2Dibromo-3-chloropane	0.0002	ND
Cyanide (mg/l)	0.2	<0.00200	1,2-Dibromoethane	0.00002	ND
Fluoride (ppm)	4	<0.100			
Lead (ppb)	0.015	<0.000500			
Mercury (mg/l)	0.002	<0.000200			
Nickel	0.1	<0.000500			
Nitrate (mg/l)	10	0.646			
Nitrite (mg/l)	1	<0.100			
Selenium(mg/l)	0.05	0.000766			
Sulfate	250	3.92			
Thallium(mg/l)	0.002	<0.000500			
<b>Synthetic Organic Chemicals</b>					
2,4-D(mg/l)	0.07	ND			
2,4,5-TP (Silvex)(mg/l)	0.05	ND			
Alachlor	0.002	ND			
Aldrin	NA	ND			
Atrazine	0.003	ND			
Benzo(a)pyrene	0.0002	ND			
Carbofuran	0.04	ND			
Chlordane	0.002	ND			
Dalapon	0.2	ND			
bis-(2-ethylhexyl)adipate	0.4	ND			
bis(2-ethylhexyl)phthlates	0.006	ND			
Dinoseb	0.007	ND			
Diquat	0.02	ND			
Endothall	0.1	ND			
Endrin	0.002	ND			

Unregulated contaminants are those for which EPA has not established drinking water standards. The purpose of unregulated contaminant monitoring is to assist EPA in determining the occurrence of unregulated contaminants in drinking water and whether future regulation is warranted.

ND = Non Detected

## Unregulated Contaminants Table

Contaminant	Average	Range
3-Hydroxycarbofuran	ND	0.000 - 0.000
Aldicarb	ND	0.000 - 0.000
Aldicarb Sulfone	ND	0.000 - 0.000
Aldicarb Sulfoxide	ND	0.000 - 0.000
Aldrin	ND	0.000 - 0.000
Butachlor	ND	0.000 - 0.000
Carbaryl	ND	0.000 - 0.000
Dicamba	ND	0.000 - 0.000
Dieldrin	ND	0.000 - 0.000
Methomyl	ND	0.000 - 0.000
Metolachlor	ND	0.000 - 0.000
Metribuzin	ND	0.000 - 0.000
Propachlor	ND	0.000 - 0.000

These charts show other contaminants that are monitored, of which some may be detected, and the results are included.

<b>Secondary Contaminants</b>			
<u>CONTAMINANT</u>	<u>AMOUNT DETECTED</u>	<u>MCL</u>	<u>UNIT MEASUREMENT</u>
Aluminum	0.0674	0.2	PPM
Chloride	7.67	250	PPM
Iron	<0.0200	0.3	PPM
Manganese	<0.000500	0.05	PPM
Silver	<0.000500	0.1	PPM
Total Dissolved Solids	65	500	PPM
Zinc	<0.000500	5	PPM

<b>Special Contaminants</b>			
<u>CONTAMINANT</u>	<u>AMOUNT DETECTED</u>	<u>MCL</u>	<u>UNIT MEASUREMENT</u>
Calcium	18.6	N/A	PPM
Carbon Dioxide	2.64	N/A	PPM
Color	<5.00	N/A	PPM
Magnesium	1.49	N/A	PPM
MBAS	<0.0250	0.5	PPM
Odor	1	3	T.O.N.
pH	7.1	N/A	su
Sodium	1.76	160	PPM
Specific Conductance	122	N/A	umho/cm
Total Alkalinity	43	N/A	PPM
Total Hardness (as CaCO3)	52.6	N/A	PPM

This was a special sampling for PFAS in 2023

<b>PFAS Special Sampling For Year 2023</b>			
<u>CONTAMINANT</u>	<u>AMOUNT DETECTED</u>	<u>MCL</u>	<u>UNIT MEASUREMENT</u>
11CI-PF3OUdS	<0.0000020	N/A	PPM
9CI-PF3ONS	<0.0000020	N/A	PPM
ADONA	<0.0000020	N/A	PPM
HFPO-DA	<0.0000020	N/A	PPM
NEtFOSAA	<0.0000020	N/A	PPM
NMeFOSAA	<0.0000020	N/A	PPM
Perfluorobutanesulfonic acid (PFBS)	0.0000045	N/A	PPM
Perfluorodecanoic acid	<0.0000020	N/A	PPM
Perfluorohexanoic acid	<0.0000020	N/A	PPM
Perfluorododecanoic acid	<0.0000020	N/A	PPM
Perfluoroheptanoic acid	<0.0000020	N/A	PPM
Perfluorohexanesulfonic acid	<0.0000020	N/A	PPM
Perfluorononanoic acid	<0.0000020	N/A	PPM
Perfluorooctanesulfonic acid (PFOS)	0.0000033	N/A	PPM
Perfluorooctanoic acid (PFOA)	0.0000028	N/A	PPM
Perfluorotetradecanoic acid	<0.0000020	N/A	PPM
Perfluorotridecanoic acid	<0.0000020	N/A	PPM
Perfluoroundecanoic acid	<0.0000020	N/A	PPM

ND = Non Detected

### Results for Tested Contaminants for year 2023

CONTAMINANT	MCLG	MCL	Amt Detected / Unit of Measure		Likely Source of Contamination
<b>Bacteriological</b>					
Total Coliform Bacteria	0	< 5%	0		Naturally present in the environment
Turbidity	0	TT	0.216	NTU	Soil runoff
<b>Radiological</b>					
Beta/photon emitters	0	4	<2.0	mrem/yr	Decay of natural and man-made deposits
Alpha , Gross	0	15	0.0+/-0.9	PC/L	Erosion of natural deposits
Radium -228	0	5	0.0+/- .04	PC/YR	Erosion of natural deposits
<b>Inorganic Chemicals</b>					
Antimony	0.006	0.006	<0.000500	ppm	Discharge from petroleum refineries; fire retardants; ceramics; electronics; solder
Arsenic	0	0.01	<0.000500	ppm	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Asbestos (MFL)	7	7	N/A	MFL	Decay of natural and man-made deposits
Barium	2	2	0.0162	ppm	Discharge of drilling wastes; discharge from metals refineries; erosion of natural deposits
Beryllium	0.004	0.004	<0.000500	ppm	Discharge from metal refineries and coal-burning factories; discharge from electrical, aerospace, and defense industries
Cadmium	0.005	0.005	<0.000500	ppm	Corrosion of galvanized pipes; erosion of natural deposits; discharge from metal refineries; runoff from waste batteries and paints
Chromium	0.1	0.1	<0.000500	ppm	Discharge from steel and pulp mills erosion of natural deposits
Copper	1	1	0.178	ppm	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Cyanide	0.2	0.2	<0.00200	ppm	Discharge from steel and pulp mills erosion of natural deposits
Fluoride	4	4	<0.100	ppm	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead	0	0.015	<0.000500	ppm	Corrosion of household plumbing systems, erosion of natural deposits
Mercury	0.002	0.002	<0.000200	ppm	Erosion of natural deposits; discharge from refineries and factories; runoff from landfills; cropland runoff
Nitrate	10	10	0.646	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite	1	1	<0.100	ppm	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium	0.05	0.05	0.000766	ppm	Discharge from petroleum and metal refineries; erosion of natural deposits; mine discharge
Sulfate	250	250	3.92	ppm	Sulfate is a substance that occurs naturally in drinking water
Thallium	0.002	0.002	<0.000500	ppm	Leaching from ore-processing sites; discharge from electronics, glass, and drug factories

ND = Non Detected

CONTAMINANT	MCLG	MCL	Amt Detected / Unit of Measure		Likely Source of Contamination
<b>Organic Chemicals</b>					
2,4-D	0.07	0.07	ND	ppm	Runoff from herbicide used on row crops
2,4,5-TP (Silvex)	0.05	0.05	ND	ppm	Residue of banned herbicide
Alachlor	0	0.002	ND	ppm	Runoff from herbicide used on row crops
Atrazine	0.003	0.003	ND	ppm	Runoff from herbicide used on row crops
Benzo(a)pyrene[PHAs]	0	0.0002	ND	ppm	Leaching from linings of water storage tanks and distribution lines
Carbofuran	0.04	0.04	ND	ppm	Leaching of soil fumigant used on rice and alfalfa
Chlordane	0	0.002	ND	ppm	Leaching of soil fumigant used on rice and alfalfa
Dalapon	0.2	0.2	ND	ppm	Runoff from herbicide used on rights of way
1,2 Dibromo-3-chloropropane	0.00002	0.0002	ND	ppm	Runoff from soil fumigant
Bis(2-ethylhexyl)adipate	0.4	0.4	ND	ppm	Discharge from chemical factories
Bis(2-ethylhexyl)phthalates	0	0.006	ND	ppm	Discharge from rubber and chemical factories
Dinoseb	0.007	0.007	ND	ppm	Runoff from herbicide used on soybeans and vegetables
Diquat	0.02	0.02	ND	ppm	Runoff from herbicide use
1,2-Dibromoethane	0.00002	0.00005	ND	ppm	Discharge from petroleum
Endothall	0.1	0.1	ND	ppm	Runoff from herbicide use
Endrin	0.002	0.002	ND	ppm	Residue of banned insecticide
Glyphosate	0.7	0.7	ND	ppm	Discharge from petroleum refineries
Heptachlor	0	0.0004	ND	ppm	Residue of banned herbicide
Heptachlor Epoxide	0	0.0002	ND	ppm	Breakdown of heptachlor
Hexachlorobenzene	0	0.001	ND	ppm	Discharge from metal refineries and agricultural chemical factories
Hexachlorocyclopentadiene	0.05	0.05	ND	ppm	Discharge from chemical factories
Gamma-BHC		0.0002	ND		Runoff from insecticide
Methoxychlor	0.04	0.04	ND	ppm	Runoff/leaching from insecticide used on fruits, vegetables, alfalfa, livestock
Oxamyl [Vydate]	0.2	0.2	ND	ppm	Runoff/leaching from insecticide used on apples, potatoes and tomatoes
PCBs	0	0.0005	ND	ppm	Runoff from landfills; discharge of waste chemicals
Pentachlorophenol	0	0.001	ND	ppm	Discharge from wood preserving factories
Picloram	0.5	0.5	ND	ppm	Herbicide runoff
Simazine	0.004	0.004	ND	ppm	Runoff from herbicide



ND = Non Detected

<b>Violatile Organic Chemicals</b>	MCL	Results		<b>Volatile Organic Chemicals</b>	MCL	Results	
1,1,1-Trichloroethane	0.2	ND	ppb	Dichlorodifluoromethane	NA	ND	ppb
1,1,2- Trichloroethane	0.005	ND	ppb	Hexachlorobutadiene	NA	ND	ppb
1,1-Dichloroethene	0.007	ND	ppb	Isopropylbenzene	NA	ND	ppb
1,2,4-Trichlorobenzene	0.07	ND	ppb	1,3-Dichlorobenzene	NA	ND	ppb
1,2-Dichloroethane	0.005	ND	ppb	Methyl tert-butyl ether	NA	ND	ppb
1,2- Dichloropropane	0.005	ND	ppb	n-Butylbenzene	NA	ND	ppb
Benzene	0.005	ND	ppb	Naphthalene	NA	ND	ppb
Carbon tetrachloride	0.005	ND	ppb	n-Propylbenzene	NA	ND	ppb
Cis-1,2-Dichloroethene	0.07	ND	ppb	2-Chlorotoluene	NA	ND	ppb
Ethylbenzene	0.7	ND	ppb	4-Chlorotoluene	NA	ND	ppb
Methylene chloride	0.005	ND	ppb	p-Isopropyltoluene	NA	ND	ppb
Chlorobenzene	0.1	ND	ppb	sec-Butylbenzene	NA	ND	ppb
1,2-Dichlorobenzene	0.6	ND	ppb	tert- Butylbenzene	NA	ND	ppb
1,4 Dichlorobenzene	0.075	ND	ppb	Trichlorofluoromethane	NA	ND	ppb
Styrene	0.1	ND	ppb				
Trichloroethene	0.005	ND	ppb				
Tetrachloroethene	0.005	ND	ppb				
Toluene	1	ND	ppb				
Trans-1,2-Dichloroethene	0.1	ND	ppb				
Vinyl chloride	0.002	ND	ppb				
Xylenes	10	ND	ppb				
1,1-Dichloropropene	NA	ND	ppb				
1,1,1,2-Tetrachloroethane	NA	ND	ppb				
1,1,2,2- Tetrachloroethane	NA	ND	ppb				
1,1-Dichloroethane	NA	ND	ppb				
1,2,3-Trichlorobenzene	NA	ND	ppb				
1,2,3-Trichloropropane	NA	ND	ppb				
1,2,4-Trimethylbenzene	NA	ND	ppb				
1,3-Dichloropropane	NA	ND	ppb				
cis 1,3-Dichloropropene	NA	ND	ppb				
trans-1,3-Dichloropropene	NA	ND	ppb				
1,3,5- Trimethylbenzene	NA	ND	ppb				
2,2- Dichloropropane	NA	ND	ppb				
Bromobenzene	NA	ND	ppb				
Bromochloromethane	NA	ND	ppb				
Bromodichloromethane	NA	0.0048	ppb				
Bromoform	NA	ND	ppb				
Bromomethene	NA	ND	ppb				
Chloroethane	NA	ND	ppb				
Chloroform	NA	0.029	ppb				
Chloromethane	NA	ND	ppb				
Dibromochloromethane	NA	0.00081	ppb				
Dibromomethane	NA	ND	ppb				

What does all this information mean?

As you can see by the table, our system had no violations. **We're proud that your drinking water meets or exceeds all Federal and State requirements.** We have learned through our monitoring and testing that some constituents have been detected, but are under the guidelines enforced by the EPA.

The sources of drinking water (both tap water and bottled water) includes 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.

Contaminants that may be present in source water include:

- (A) **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- (B) **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or the result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- (C) **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- (D) **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 stormwater runoff, and septic systems.
- (E) **Radioactive contaminants**, which can be naturally occurring or be the result of oil and gas production and mining activities.

EPA prescribes regulations, which limit the amount, 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.

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.

Nitrate in drinking water at levels above 10 ppm is a health risk for infants less than six months of age. High nitrate levels in drinking water can cause blue baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant you should ask advice from your health care provider.

Based on a study conducted by ADEM with the approval of the EPA a statewide waiver for the monitoring of asbestos and dioxin was issued. Thus monitoring for these contaminants is not required.

MCL's 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 for a lifetime to have a one-in-a-million chance of having the described health effect.

Total Coliform: The total Coliform Rule requires water systems to meet a stricter limit for coliform bacteria. Cloiform bacteria are usually harmless, but their presents in water can be an indication of disease-causing bacteria. When coliform bacteria are found special follow-up test are done to determine if harmful bacteria are present in the water supply. If this limit is exceeded, the water supplier must notify the public by newspaper, television or radio. To comply with the stricter regulation, we have increased the average amount of chlorine in the distribution system.

Remove all \* or put in an explanation

ND = Non Detected

TEST RESULTS						
Contaminant	Violation Y/N	Level	Unit	MCLG	MCL	Likely Source of Contamination
		Detected	Measurement			

Microbiological Contaminants			Test Date FY 2021			
Total Coliform Bacteria *	No	0	Total Coliform Present CP	0	presence of coliform bacteria in 5% of monthly samples	Naturally present in the environment
Turbidity *	No	0.216 max 100% <.3	NTU	N/A	TT	Soil runoff

Radioactive Contaminants			Test Date FY 2018			
Beta/photon emitters	No	<2.0	pCi/L	0	4	Decay of natural and man-made deposits
Alpha Gross *	No	0.0+/-0.9	pCi/L	0	15	Erosion of natural deposits

Inorganic Contaminants			Test Date FY 2023			
Barium	No	0.0162	Mg/ L	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Copper *	No	0.178	ppm	1.3	AL=1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives
Fluoride	No	<0.100	ppm	4	4	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Lead *	No	<0.000500	ppm	0	AL=.015	Corrosion of household plumbing systems, erosion of natural deposits
Chromium *	No	<0.000500	ppm	0.100	0.1	Discharge from steel and pulp mills: erosion of natural deposits
Nitrate	No	0.646	ppm	10	10	Runoff from fertilizer use: leaching from septic tanks, sewage, erosion of natural deposits
Nitrite	No	<0.100	ppm	1	1	

Synthetic Organic Contaminants including Pesticides and Herbicides			Test Date FY 2020			
Dibromochloro * propane	No	0	nanograms/;	0	200	Runoff/leaching from soil fumigant used on soybeans, cotton, pineapples, and orchards

Volatile Organic Contaminants			Test Date FY 2023			
TTHM [Total trihalomethanes]	No	34.00	ppb	0	80	By-product of drinking water chlorination
HAA5 (Haloacetic Acids)	No	37.00	ppb	0	60 *	By-product of drinking water chlorination

## The following two pages are the results from West Morgan East Lawrence Water Authority.

Their water source is surface water from the Wheeler Lake Reservoir on the Tennessee River, which is processed at the J.D. Sims – R.M. Hames Water Treatment Facility, located at Lock A, near Hillsboro in Lawrence County.

### West Morgan East Lawrence Water Authority Results

Monitoring Schedule	
The EPA or ADEM requires us to monitor for certain contaminants less than once per year because the concentrations of these contaminants do not change frequently. This report contains results from the most recent monitoring which was performed in accordance with this regulatory schedule.	
Constituents Monitored	Year
Inorganic Contaminants	2023
Lead/Copper	2022
Microbial Contaminants	2023
Nitrates	2023
Radioactive Contaminants	2020
Synthetic Organic Contaminants	2023
Volatile Organic Contaminants	2023
Disinfection By Products	2023
Cryptosporidium	2017
UCMR 4	2018
DSE Disinfection Byproducts	2017

**Plain Language Definitions:**

MCL- Maximum Contaminant Level- highest level of a contaminant allowed in drinking water.  
MCLG- Maximum Contaminant Level Goal- the level of a contaminant in drinking water below which there is no known or expected risk to health.  
MRDL- Maximum Residual Disinfection 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 Disinfection Level Goal-the level of a drinking water disinfectant below which there is no known or expected risk to health.  
AL (Action Level)- the concentration of a contaminant which if exceeded triggers treatment or other requirements to be followed.  
TT (Treatment Technique)- required process to reduce a contaminant.  
PPM- parts per million or milligrams per liter- corresponds to 1 minute in 2 years or a single penny in \$10,000.  
PPB- parts per billion or micrograms per liter- corresponds to 1 minute in 2,000 years or a single penny in \$10,000,000.  
PPT- parts per trillion or nanograms per liter- corresponds to 1 minute in 2,000,000 years or 1 penny in \$10,000,000,000.  
NTU- Nephelometric Turbidity Unit- measurement of the clarity of water.  
N/A- Not applicable  
Non- Detect- constituent is not present  
HAA5- Total Haloacetic Acids  
TTHM- Total Trihalomethanes

Detected Drinking Water Contaminants							
CONTAMINANT	Violation Yes/No	MCLG	MCL	RANGE	DETECTED	UNIT	CONTAMINATION SOURCE
Chlorine	No	MRDL 4	MRDL 4	1.45-2.22	1.74	ppm	Additive used to control microbes
Chlorine Dioxide	No	n/a	.8	0-.17	.02	ppm	Additive used to control microbes
Chlorite	No	n/a	1.0	0-.38	.12	ppm	Additive used to control microbes
Turbidity	No	0	TT	.011-.046	.046	NTU	Soil runoff
Total Organic Carbon	No	n/a	TT	0-.12	.02	ppm	Soil runoff
Nitrate, as N	No	10	10	n/a	.066	ppm	Runoff from fertilizer use, sewage
HAA5	No	0	60	0-2.8	.2	ppb	Disinfection by product
TTHM	No	0	80	0-8.6	3.0	ppb	Disinfection by product
Copper (90 <sup>th</sup> percentile) zero sites exceeding	No	1.3	AL=1.3	.001-.059	.041	ppm	Erosion of natural deposits plumbing corrosion
Unregulated Contaminants							
Bromodichloromethane	No	n/a	n/a	0-2.10	.7	ppb	Disinfection by product, naturally occurring in the environment
Chloroform	No	n/a	n/a	0-5.40	2.3	ppb	Disinfection by product
Dibromochloromethane	No	n/a	n/a	0-1.10	.7	ppb	Disinfection by product
Dichloroacetic acid	No	n/a	n/a	0-1.5	.4	ppb	Disinfection by product
Trichloroacetic acid	No	n/a	n/a	0-1.3	.3	ppb	Disinfection by product
Secondary Contaminants							
Aluminum	No	n/a	.2	.027	.027	ppm	mining and weathering of minerals naturally occurring
Iron	No	n/a	.3	0-.020	.011	ppm	occurs naturally or from water treatment
Manganese	No	n/a	.05	0-.014	.003	ppm	naturally occurring
Total Dissolved Solids	No	n/a	500	10.0	10.0	ppm	naturally occurring or from runoff
Corrosivity Characteristics Monitoring							
Sodium	No	n/a	n/a	2.3	2.3	ppm	Naturally occurring
Calcium	No	n/a	n/a	4.2	4.2	ppm	Naturally occurring, dissolved mineral
pH	No	n/a	n/a	7.3-8.1	7.58	n/a	Naturally occurring or from runoff
Total Hardness, as CaCO3	No	n/a	n/a	6-20	10.6	ppm	Naturally occurring or from runoff
Alkalinity, total as CaCO3	No	n/a	n/a	11-26	18.0	ppm	Carbonate, bicarbonate, and hydroxide
Specific Conductance	No	n/a	n/a	35.3	35.3	Umho/cm	Measure of how well water can conduct an electrical current
Langelier Index	No	n/a	n/a	-2.01	-2.01	n/a	Waters tendency to inhibit or encourage corrosion
Long Term 2 Enhanced Surface Water Treatment Rule (Tested on source water, pre-treatment)							
Cryptosporidium	n/a	0	TT	0-3	3	cysts/L	wildlife/human activity
Giardia	n/a	0	TT	0-5	5	cysts/L	wildlife/human activity

Standard List of Primary Drinking Water Contaminants

Contaminant	MCL	Unit	Contaminant	MCL	Unit
Total Coliform Bacteria	<5%	present or absent	trans-1,2-Dichloroethylene	100	ppb
Fecal Coliform and E.coli	0	present or absent	Dichloromethane	5	ppb
Turbidity	TT	NTU	1,2-Dichloropropane	5	ppb
Cryptosporidium	TT	Calculated organisms/L	DI (2-ethylhexyl)adipate	400	ppb
Beta/Photon emitters	4	mewm/yr	DI (2-ethylhexyl)phthalate	6	ppb
Alpha emitters	15	pCi/L	Dinoseb	7	ppb
Combined Radium	5	pCi/L	Dioxin [2,3,7,8-TCDD]30	30	ppq
Uranium	30	pCi/L	Diquat	20	ppb
Antimony	6	ppb	Endothall	100	ppb
Arsenic	10	ppb	Endrin	2	ppb
Asbestos	7	MFL	Epichlorohydrin	TT	TT
Barium	2	ppm	Ethylbenzene	700	ppb
Beryllium	4	ppb	Ethylene dibromide	50	ppt
Cadmium	5	ppb	Glyphosphate	700	ppb
Chromium	100	ppb	Heptachlor	400	ppt
Copper	AL=1.3	ppm	Heptachlor epoxide	200	ppt
Cyanide	200	ppb	Hexachlorobenzene	1	ppb
Fluoride	4	ppm	Hexachlorocyclopentadiene	50	ppb
Lead	AL=15	ppb	Lindane	200	ppt
Mercury	2	ppb	Methoxychlor	40	ppb
Nitrate	10	ppm	Oxamyl (Vydate)	200	ppb
Nitrite	1	ppm	polychlorinated biphenyls (PCBs)	0.5	ppb
Selenium	.05	ppm	Pentachlorophenol	1	ppb
Thallium	.002	ppm	Picloram	500	ppb
2,4-D	70	ppb	Simazine	4	ppb
Acrylamide	TT	TT	Styrene	100	ppb
Alachlor	2	ppb	Tetrachloroethylene	5	ppb
Benzene	5	ppb	Toluene	1	ppm
Benzo(a)pyrene [PAHs]	200	ppl	Toxaphene	3	ppb
Carbofuran	40	ppb	2,4,5-TP (Silvex)	50	ppb
Carbon Tetrachloride	5	ppb	1,2,4-Trichlorobenzene	.07	ppm
Chlordane	2	ppb	1,1,1-Trichloroethane	200	ppb
Dalapon	200	ppb	1,1,2-Trichloroethane	5	ppb
Dibromochloropropane	200	ppt	Trichloroethylene	5	ppb
o-Dichlorobenzene	600	ppb	Vinyl chloride	2	ppb
p-Dichlorobenzene	75	ppb	Xylenes	10	ppm
1,2-Dichloroethane	5	ppb	Chlorine	4	ppm
1,1-Dichloroethylene	7	ppb	Chlorine Dioxide	800	ppb
cis-1,2-Dichloroethylene	70	ppb	Chloramines	4	ppm
Bromate	10	ppb	Chlorite	1	ppm
TTHM	80	ppb	HAA5	60	ppb
Total Organic Carbon	TT	ppm	Atrazine	.003	ppm
Legionella	TT	TT	Viruses (enteric)	TT	TT
Giardia lamblia	TT	TT	Heterotrophic plate count	TT	TT

The fourth unregulated contaminant monitoring rule requires some systems to monitor for 30 unregulated contaminants during 2018-2020. The table below shows the results of the detected contaminants.

Contaminants	Detected (ppb)	Range
Raw Water (before treatment)		
Bromide	33.5	27.4-45.3
Total Organic Carbon	2428	2040-3060
Entry Point (treatment plant)		
Manganese	.944	.485-1.60
Distribution System Data		
HAA5	5.41	2.91-7.52
HAA6Br	6.54	4.19-9.58
HAA9	10.45	6.29-14.37

Unregulated Contaminants		
1,1-Dichloropropene	Bromobenzene	Aldicarb
1,1,1,2-Tetrachloroethane	Aldicarb Sulfone	Aldrin
1,1,2,2-Tetrachloroethane	Aldicarb Sulfoxide	Bromofom
1,3,5-Trimethylbenzene	Dibromomethane	Butachlor
2,2-Dichloropropane	Isopropylbenzene	Carbaryl
Dichlorodifluoromethane	Sec-Butylbenzene	Chloroform
Dibromochloromethane	Bromomethane	Dieldrin
3-Hydroxycarbofuran	P-Chlorotoluene	Dicamba
1,3-Dichloropropene	O-Chlorotoluene	Methomyl
1,3-Dichloropropane	N-Butylbenzene	MTBE
1,2,3-Trichloropropane	N-Propylbenzene	Metribuzin
Trichlorofluoromethane	1,1-Dichloroethane	Propachlor
Bromochloromethane	Chloromethane	Metolachlor
Bromodichloromethane	1,1-Dichloroethane	Naphthalene
Hexachlorobutadiene	M-Dichlorobenzene	Chloroethane
Tert-Butylbenzene	P-Isopropyltoluene	
1,2,4-Trimethylbenzene		

Secondary Drinking Water Contaminants		
Aluminum	Fluoride	pH
Chloride	Foaming agents	Silver
Color	Iron	Sulfate
Copper	Manganese	Total Dissolved Solids
Corrosivity	Odor	Zinc
Hardness	MBAS	Magnesium
Alkalinity, Total CaCo3	Calcium, as Ca	Langelier Index
Nickel	Sodium	

Thank you for allowing us to continue providing your family with clean, quality water this year. In order to maintain a dependable water supply we sometimes need to make improvements that will benefit all our customers. These improvements are often reflected as structure or physical adjustments.

Many of you know that we allow public use of our Lakes for fishing, and we continue to encourage everyone who wishes to take advantage of the facilities to do so. We do however request that those who use boats do so with Electric motors **ONLY**. We do not allow gas motors of any kind to be attached to boats. We are now keeping our gates locked at all times. This is an effort to maintain better security and structural integrity of the Lakes. We therefore ask for help in protecting your water by alerting us if you see anyone on either Lake violating any of these guidelines, by calling the Treatment Plant at (256)974-1996 or City hall at (256)974-8551 or (256)974-5191. The best defense we have against any security violations is the public itself. We are continuing to work on our security vulnerability assessment to better protect your water system.

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. Moulton Water Works 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 <http://www.epa.gov/safewater/lead>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as people with cancer and undergoing chemotherapy, people 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 (Environmental Protection Agency), CDC (Center of Disease Control) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.

We at Moulton Water Works are working around the clock to provide top quality water to every tap. We ask that all our customers help us protect our water sources, which are the heart of our community, our way of life, and our children's future.

**If you have any questions please call our office at (256) 974-8551 or (256) 974-5191.**