

# ***Graves County Water District Water Quality Report 2024***

For previous reports include year.  
Example: [tapwaterinfo.com/2023/gravescounty](http://tapwaterinfo.com/2023/gravescounty)

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

Water System ID: KY0420084; KY0420027; KY0420172; KY0420194; KY0420534; KY0420405

Manager: Brent Shultz

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Meeting Location and Time: Mayfield Electric and Water Office, 408 East Broadway / Fourth Tuesday each month at 8:00 AM

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 water poses a health risk. More information about contaminants and potential health effects may be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791). To understand the possible health effects described for many regulated contaminants, 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.

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 may pick up substances resulting from the presence of animals or from human activity. Contaminants that may be present in source water include: Microbial contaminants, such as viruses and bacteria, (sewage plants, septic systems, livestock operations, or wildlife). Inorganic contaminants, such as salts and metals, (naturally occurring or from stormwater runoff, wastewater discharges, oil and gas production, mining, or farming). Pesticides and herbicides, (stormwater runoff, agriculture or residential uses). Organic chemical contaminants, including synthetic and volatile organic chemicals, (by-products of industrial processes and petroleum production, or from gas stations, stormwater runoff, or septic systems). Radioactive contaminants, (naturally occurring or from oil and gas production or mining activities). In order to ensure that tap water is safe to drink, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA regulations establish limits for contaminants in bottled water to provide the same protection for public health.

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 Information:**

The groundwater for Mayfield and the water systems comprising the Graves County Water District comes from wells drilled into the Claiborne Group Aquifer that lies beneath most of the region. Wellhead Protection Plans were developed for these wells to determine their susceptibility to contamination and to develop a multi-barrier approach to protect the water sources of the communities. The susceptibility to contamination for these sources is generally low but there are areas of concern. Potential sources of contamination include transportation corridors, agricultural application, fuel storage tanks, and poorly constructed and /or abandoned water wells drilled into the same aquifer. Chemical spills near highways, industrial sites, agricultural, or residential locations pose a threat to the water supply. We encourage you to help us protect your drinking water by reporting any activity that may pose a threat. The Wellhead Protection Plans are available for review at our office during normal business hours. Information is also available at the Purchase Area Development District in Mayfield.

## **Information About Lead:**

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. Your local water system is responsible for providing high quality drinking water and removing lead pipes, but cannot control the variety of materials used in plumbing components in your home. You share the responsibility for protecting yourself and your family from the lead in your home plumbing. You can take responsibility by identifying and removing lead materials within your home plumbing and taking steps to reduce your family's risk. Before drinking tap water, flush your pipes for several minutes by running your tap, taking a shower, doing laundry or a load of dishes. You can also use a filter certified by an American National Standards Institute accredited certifier to reduce lead in drinking water. If you are concerned about lead in your water and wish to have your water tested, contact your local water system. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available at <http://www.epa.gov/safewater/lead>.

## **Service Line Inventory Information:**

To address lead in drinking water, EPA requires that all community water systems develop and maintain an inventory of service line materials. We have completed a service line inventory (SLI) and it is available for review at our office.

## **Lead Sample Results Availability Information:**

We are required to periodically sample water from customer taps to determine lead and copper levels. EPA sets the lead action level at 0.015 mg/L (15 ppb). For a water system to be in compliance, at least 90% of tap water samples must have lead levels below this limit. This report contains the 90th percentile and range of our most recent sampling. The individual results for each location sampled can be reviewed at our office.

We are only required to test for some contaminants periodically, so the results listed in this report may not be from the previous year. Only detected contaminants are included in this report. For a list of all contaminants we test for please contact us. Copies of this report are available upon request by contacting our office.

**Water Systems of the Graves County Water District:**

Consumers Water District – KY0420084 – Purchases from Mayfield  
Fancy Farm Water District – KY0420027 – Treats from community wells  
Hardeman Water District – KY0420172 – Purchases from Mayfield  
Hickory Water District – KY0420194 – Treats from community wells  
Sedalia Water District – KY0420534 - Treats from community wells  
South Graves Water District – KY0420405 - Treats from community wells

**Some or all of these definitions may be found in this report:**

**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 (MRDL)** - 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.

**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.

**Below Detection Levels (BDL)** - laboratory analysis indicates that the contaminant is not present.

**Not Applicable (N/A)** - does not apply.

**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, ( $\mu\text{g/L}$ ). One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Parts per trillion (ppt)** - 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)** - 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)** - a measure of the radioactivity in water.

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

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

**Nephelometric Turbidity Unit (NTU)** - a measure of the clarity of water. Turbidity has no health effects. However, turbidity can provide a medium for microbial growth. Turbidity is monitored because it is a good indicator of the effectiveness of the filtration system.

**Variations & Exemptions (V&E)** - State or EPA permission not to meet an MCL or a treatment technique under certain conditions.

**Action Level (AL)** - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system shall follow.

**Treatment Technique (TT)** - a required process intended to reduce the level of a contaminant in drinking water.

Regulated Contaminant Test Results								Mayfield Electric and Water
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination	
Barium [1010] (ppm)	2	2	0.019	0.019 to 0.019	Jul-23	No	Drilling wastes; metal refineries; erosion of natural deposits	
Fluoride [1025] (ppm)	4	4	0.73	0.73 to 0.73	Jul-23	No	Water additive which promotes strong teeth	
Nitrate [1040] (ppm)	10	10	2.93	2.93 to 2.93	Jul-24	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits	
Tetrachloroethylene [2987] (ppb)	5	0	2.6	2.6 to 2.6	Aug-24	No	Leaching from PVC pipes; discharge from factories and dry cleaners	

Regulated Contaminant Test Results								Graves Co. Water District - Consumers
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination	
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.30 (highest average)	0.95 to 1.64	2024	No	Water additive used to control microbes.	
HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample)	60	N/A	1 (high site)	0 to 1 (range of individual sites)	2024	No	Byproduct of drinking water disinfection	
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	3 (high site)	2 to 3 (range of individual sites)	2024	No	Byproduct of drinking water disinfection.	

Household Plumbing Contaminants							
Copper (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.048 (90 <sup>th</sup> percentile)	0.004 to 0.06	Aug-23	No	Corrosion of household plumbing systems
Lead (ppb) Round 1 sites exceeding action level 0	AL = 15	0	2 (90 <sup>th</sup> percentile)	0 to 4	Aug-23	No	Corrosion of household plumbing systems

Regulated Contaminant Test Results								Graves Co. Water District - Hardeman
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination	
<b>Disinfectants/Disinfection Byproducts and Precursors</b>								
Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.94 (highest average)	0.7 to 1.5	2024	No	Water additive used to control microbes.	
HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample)	60	N/A	8 (high site)	0 to 8 (range of individual sites)	2024	No	Byproduct of drinking water disinfection	
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	26 (high site)	7 to 26 (range of individual sites)	2024	No	Byproduct of drinking water disinfection.	

Household Plumbing Contaminants							
Copper (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.113 (90 <sup>th</sup> percentile)	0.004 to 0.117	Sep-24	No	Corrosion of household plumbing systems
Lead (ppb) Round 1 sites exceeding action level 1	AL = 15	0	0 (90 <sup>th</sup> percentile)	0 to 39	Sep-24	No	Corrosion of household plumbing systems

Regulated Contaminant Test Results								Graves Co. Water District - Fancy Farm
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination	
Barium [1010] (ppm)	2	2	0.006	0.006 to 0.006	Jul-23	No	Drilling wastes; metal refineries; erosion of natural deposits	
Fluoride [1025] (ppm)	4	4	0.55	0.55 to 0.55	Jul-23	No	Water additive which promotes strong teeth	
Nitrate [1040] (ppm)	10	10	1.08	1.08 to 1.08	Aug-24	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits	

Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.21 (highest average)	0.72 to 1.99	2024	No	Water additive used to control microbes.
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	5 (high site)	5 to 5 (range of individual sites)	2024	No	Byproduct of drinking water disinfection.

Household Plumbing Contaminants							
Copper (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.044 (90 <sup>th</sup> percentile)	0.008 to 0.051	Sep-23	No	Corrosion of household plumbing systems
Lead (ppb) Round 1 sites exceeding action level 0	AL = 15	0	5 (90 <sup>th</sup> percentile)	0 to 6	Sep-23	No	Corrosion of household plumbing systems

Regulated Contaminant Test Results								Graves Co. Water District - Hickory
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination	
Barium [1010] (ppm)	2	2	0.007	0.007 to 0.007	Jul-23	No	Drilling wastes; metal refineries; erosion of natural deposits	
Fluoride [1025] (ppm)	4	4	0.62	0.62 to 0.62	Jul-23	No	Water additive which promotes strong teeth	
Nitrate [1040] (ppm)	10	10	1.01	1.01 to 1.01	Jul-24	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits	

Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.13 (highest average)	0.72 to 1.7	2024	No	Water additive used to control microbes.
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	3 (high site)	1 to 3 (range of individual sites)	2024	No	Byproduct of drinking water disinfection.

Household Plumbing Contaminants							
Copper (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.107 (90 <sup>th</sup> percentile)	0.006 to 0.139	Sep-22	No	Corrosion of household plumbing systems
Lead (ppb) Round 1 sites exceeding action level 0	AL = 15	0	0 (90 <sup>th</sup> percentile)	0 to 2	Sep-22	No	Corrosion of household plumbing systems

Regulated Contaminant Test Results			Graves Co. Water District - Sedalia				
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.03	0.03 to 0.03	Jul-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.65	0.65 to 0.65	Jul-23	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	7.03	3.42 to 7.03	Apr-24	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.92 (highest average)	0.55 to 1.54	2024	No	Water additive used to control microbes.
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	4 (high site)	4 to 4 (range of individual sites)	2024	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.224 (90 <sup>th</sup> percentile)	0.007 to 0.332	Aug-23	No	Corrosion of household plumbing systems
Lead (ppb) Round 1 sites exceeding action level 0	AL = 15	0	6 (90 <sup>th</sup> percentile)	0 to 12	Aug-23	No	Corrosion of household plumbing systems

Due to the agricultural activities in our area the nitrate levels are higher than in most communities. We are monitoring the nitrate levels every quarter.

Nitrate. Nitrate in drinking water at levels above 10 ppm is a health risk for infants of 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.

Regulated Contaminant Test Results			Graves Co. Water District - South Graves				
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.008	0.008 to 0.008	Jul-23	No	Drilling wastes; metal refineries; erosion of natural deposits
Nitrate [1040] (ppm)	10	10	0.444	0.444 to 0.444	Aug-24	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.39 (highest average)	0.8 to 2.09	2024	No	Water additive used to control microbes.
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	2 (high site)	0 to 2 (range of individual sites)	2024	No	Byproduct of drinking water disinfection.
Household Plumbing Contaminants							
Copper (ppm) Round 1 sites exceeding action level 0	AL = 1.3	1.3	0.033 (90 <sup>th</sup> percentile)	0.008 to 0.062	Sep-22	No	Corrosion of household plumbing systems
Lead (ppb) Round 1 sites exceeding action level 0	AL = 15	0	0 (90 <sup>th</sup> percentile)	0 to 2	Sep-22	No	Corrosion of household plumbing systems