

Western Lewis-Rectorville Water and Gas District

Water Quality Report 2021

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Meeting location and time:
Water Office - 8044 KY 3161
2nd Tuesday monthly at 6 PM

Western Lewis-Rectorville Water District treats groundwater from the Ohio River Alluvial Aquifer. An analysis of this source indicated the susceptibility to contamination, to be moderate. Potential sources of contamination include: a fertilizer waste site, a salvage yard, railroads, highways, storage tanks, a conveyor belt line, and septic systems. The complete Susceptibility Analysis Report is available at our office.

Approximately 10% of our water is purchased from Maysville which treats surface water from the Ohio River. An analysis of the susceptibility of the Maysville Utility Commission's raw water supply to contamination indicates that the susceptibility potential is generally high. Areas of high concern include: ports along the Ohio River, bridges, railroads, row crops, abandoned oil or gas wells, active superfund sites, underground storage tanks, KPDES permitted discharges, areas with hazardous chemical usage and waste generators or transporters. The Source Water Assessment Plan for Maysville can be reviewed in their office or at the Buffalo Trace Area Development District.

Approximately 10% of our water is purchased from the Greater Fleming County Regional Water Commission which uses groundwater supplied by three wells, in the Ohio River Alluvium, located in northwestern Lewis County. The aquifer has an overall susceptibility ranking of medium. An assessment indicates eleven potential sources of contamination. Of these, five were unused wells formerly used as home water sources or for watering livestock. Two potential sources of great concern are a railroad and a nitrate source which has been attributed to a former fertilizer storage area. Within the wellhead protection area there are approximately 224 acres of agricultural land and 580 acres of unmanaged woodland. The complete source water assessment is available at the GFCRWC Office.

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).

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).

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. Your local public water system 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 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.

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.

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

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.

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.

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

The data presented in this report are from the most recent testing done in accordance with administrative regulations in 401 KAR Chapter 8. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of the data in this table, though representative, may be more than one year old. **Copies of this report are available upon request by contacting our office during business hours.**

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.

Regulated Contaminant Test Results								Western Lewis Rectorville Water District	
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection		Date of Sample	Violation	Likely Source of Contamination	
Radioactive Contaminants									
Combined radium (pCi/L)	5	0	1.15	1.15	to 1.15	May-20	No	Erosion of natural deposits	
Inorganic Contaminants									
Barium [1010] (ppm)	2	2	0.029	0.029	to 0.029	Apr-20	No	Drilling wastes; metal refineries; erosion of natural deposits	
Fluoride [1025] (ppm)	4	4	0.81	0.81	to 0.81	Apr-20	No	Water additive which promotes strong teeth	
Nickel (ppb) (US EPA remanded MCL in February 1995)	N/A	N/A	1	1	to 1	Apr-20	No	N/A	
Nitrate [1040] (ppm)	10	10	5.77	0	to 5.77	Apr-21	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits	
Disinfectants/Disinfection Byproducts and Precursors									
Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.76 (highest average)	0.3	to 1.5	2021	No	Water additive used to control microbes.	
HAA (ppb) (Stage 2) [Haloacetic acids] (Annual Sample)	60	N/A	8 (high site)	7	to 8 (range of individual sites)	2021	No	Byproduct of drinking water disinfection	
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	35 (high site)	31	to 35 (range of individual sites)	2021	No	Byproduct of drinking water disinfection.	
Household Plumbing Contaminants									
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.383 (90 th percentile)	0.004	to 0.898	Aug-20	No	Corrosion of household plumbing systems	
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	3 (90 th percentile)	0	to 3	Aug-20	No	Corrosion of household plumbing systems	
			Average	Range of Detection					
Fluoride (added for dental health)			0.9	0.65 to 1.26					
Sodium (EPA guidance level = 20 mg/L)			39.2	39.15 to 39.15					

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								Greater Fleming County Regional Water Commission	
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination		
Inorganic Contaminants									
Fluoride [1025] (ppm)	4	4	0.69	0.69 to 0.69	Apr-21	No	Water additive which promotes strong teeth		
Nitrate [1040] (ppm)	10	10	3.13	0.7 to 3.13	Apr-21	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits		

Regulated Contaminant Test Results								Maysville Utility Commission	
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination		
Barium [1010] (ppm)	2	2	0.024	0.024 to 0.024	Feb-21	No	Drilling wastes; metal refineries; erosion of natural deposits		
Fluoride [1025] (ppm)	4	4	0.99	0.99 to 0.99	Feb-21	No	Water additive which promotes strong teeth		
Nitrate [1040] (ppm)	10	10	0.682	0.682 to 0.682	Feb-21	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits		
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.54 (lowest average)	1.04 to 1.85 (monthly ratios)	2021	No	Naturally present in environment.		

*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

Other Constituents					
Turbidity (NTU) TT * Representative samples	Allowable Levels	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity is a measure of the clarity of the water and not a contaminant.	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.207	100	No	Soil runoff



This report will not be mailed unless requested. If you would like a copy mailed to you please contact our office.