East Clark Co. Water District
Water Quality Report 2019

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East Clark Co. Water District purchases water from Winchester Municipal Utilities. Winchester treats surface water from Kentucky River Pool 10 and Carroll Ecton Reservoir. An analysis of the susceptibility of the water supply to contamination indicates that this susceptibility is generally moderate. However, there are a few areas of high concern. Several highway bridges, a segment of railroad, areas of row crops, three active Superfund Sites, three waste generators and/or transporters and impaired streams occur in the immediate area of the Kentucky River intake. Row crops in the immediate area increase the likelihood that pesticides and fertilizers may be introduced into the water supply. Superfund sites in the area indicate the presence of land that has been contaminated by hazardous waste. Numerous permitted operations and activities and other potential contaminant sources of moderate concern are within the watershed that cumulatively increase the potential for the release of contaminants within the area. The complete Source Water Assessment Plan is available for review at Winchester Municipal Utilities.

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).

Information About 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. 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.
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, (µg/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.
Variances & 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.

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

This report will not be mailed. Copies are available in our office. If you would like a copy mailed to you, please contact our office.

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.

East Clark Water District Testing Results

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Regulated Contaminant Test Results			**East Clark Water District**				
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.0845 (90^{th} percentile)	0.0054 to 0.167	Jul-19	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	0 (90^{th} percentile)	0 to 0	Jul-19		Corrosion of household plumbing systems
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.15 (highest average)	0.084 to 1.67	2019	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	63 (high site average)	35 to 65 (range of individual sites)	2019	YES	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	72 (high site average)	39 to 92 (range of individual sites)	2019	No	Byproduct of drinking water disinfection.

Winchester Municipal Utilities Testing Results

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	Allowable Levels	**Highest Single Measurement**	**Lowest Monthly %**	**Violation**	**Likely Source of Turbidity**
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% of monthly samples	0.1	100	No	Soil runoff

Regulated Contaminant Test Results			**Winchester Municipal Utilities**				
Contaminant [code] (units)	**MCL**	**MCLG**	**Report Level**	**Range of Detection**	**Date of Sample**	**Violation**	**Likely Source of Contamination**
Inorganic Contaminants							
Barium [1010] (ppm)	2	2	0.0098	0.0098 to 0.0098	Mar-19	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.95	0.95 to 0.95	Mar-19	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.72	0.72 to 0.72	Jan-19	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Disinfectants/Disinfection Byproducts and Precursors							
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.88 (lowest average)	1.03 to 3.06 (monthly ratios)	2019	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.

Unregulated Contaminants (UCMR 4)	**average**	**range (ppb)**	**date**
Manganese	0.137	0 to 0.412	Aug-19
HAA5	49.708	33.6 to 68.3	Jan-20
HAA6Br	6.553	3.93 to 9.67	Jan-20
HAA9	55.983	39.5 to 73	Jan-20

Your drinking water has been sampled for a series of unregulated contaminants. Unregulated contaminants are those that EPA has not established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they should have a standard. As our customers, you have a right to know that these data are available. If you are interested in examining the results, please contact our office during normal business hours.

Violations

Testing results show that East Clark Water District exceeded the standard, or maximum contaminant level (MCL) for haloacetic acids (HAA). The standard for haloacetic acids is 0.060 mg/L. These are determined by averaging all samples at each sampling location for the previous 12 months.
2019-937405 1/1/2019 – 3/31/2019 HAA 0.063 mg/L

Some people who drink water containing haloacetic acids in excess of the MCL over many years may have an increased risk of getting cancer.
We are working to minimize the formation of haloacetic acids while ensuring we maintain an adequate level of disinfectant. We have increased flushing of water lines and we are also monitoring water storage tank levels and water flow patterns within the distribution system. We returned to compliance the following quarter. Public notices were distributed for each of these violations.