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Address: Public Meetings 300 West Main Street

Vine Grove, Kentucky 40175

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1st Monday of each Month at 6:30 PM

Our water is purchased from Hardin County Water District #1 (PWSID # KY0470393) which comes from The Pirtle Springs Water Treatment Plant and the Fort Knox Water Treatment Plant (PWSID # KY0470990). Hardin County Water District # 1 has two Karst, surface water sources for the Pirtle Springs Water Treatment Plant. They are Pirtle Springs and the head of Rough Springs. Fort Knox has two sources which includes 15 deep wells on the West Point Aquifer, these are classified as ground water. They also utilize a Mc Cracken Springs, a surface water source near Otter Creek. The sources of high potential impact include: underground storage tanks, agricultural, oil and gas wells, and septic systems. The Hardin County Water District # 1 has completed a source water determination plan which found both sources are under direct influence of surface water. Source water assessment information and a copy of the Fort Knox Annual Water Quality Report may be obtained from at (270) 624-5252. You can obtain these source water assessments from the Lincoln Trail Ad District located at 613 College Street Elizabethtown, Kentucky 42701 or call (270) 769-2393.

Hardin County Water District #1 purchases water from Hardin County Water District #2 and Louisville Water Company. The Hardin County Water District #2 withdraws water from White Mill Spring, which is classified as surface water. A susceptibility determination indicates that there are 345 potential sources of contamination within the protection areas. Risks include highways, railroad, septic systems row crops, Pasturelands, junkyard, gas stations, AST, UST, in old water wells. All potential contaminant sources are classified is high due to the geologic makeup of a karst terrain. Hardin County Water District #2 (HCWD #2), at the City Springs Water Treatment Plant, currently draws its surface water supply from 7 wells and two Karst Springs. The delineated wellhead protection area includes the City of Elizabethtown and several major freeways in predominantly karst terrain. The contaminant source inventory indicates hundreds of potential contaminant sources within this geological environment. In addition to freeways and railways, potential contaminant sources range from unknown number of septic systems too large chemical and manufacturing industries. All potential contaminant sources are classified is high due to the geologic makeup of a karst terrain. To view the entire HCWD#2 Source Water Assessment and Protection Plan (270) 737-1056. Louisville Water Company (LWC) utilizes the Ohio River as a source for surface water. Louisville water operates a surface Treatment plant, with both intakes on the Ohio River. The Kentucky division of water approved a source water assessment and protection plan for Jefferson County. The plan looks at LWC susceptibility Two possible sources of contamination. Materials on the Ohio River and permitted discharges of sanitary sewers are the highest contamination risks. In Jefferson County the land use in the protection area is Primarily zoned for residential and commercial use , with only a few industrial sites. Source water contamination risks are relatively low. Louisville water company maintains an emergency preparedness and disaster Service plan to address potential contamination risks. To view the entire LWC Source Water Assessment and Protection Plan call Jeremy Rainey at (502)569-3600

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.

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.

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 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.**

Hardin Co. Water District # 1 (HC1), Fort Knox A Central WTP(FKA), Fort Knox B Central WTP (FKB), Vine Grove Water Department (VG)

Regulated Contaminant Test Results Vine Grove Water Department

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
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Radioactive Contaminants

Beta photon emitters (pCi/L)	50	0	FKB	6.5	6.5 to 6.5	2017	No	Decay of natural and man-made deposits
Alpha emitters [4000] (pCi/L)	15	0	FKB	3.4	3.4 to 3.4	2017	No	Erosion of natural deposits

Inorganic Contaminants

Barium [1010] (ppm)	2	2	HC1	0.028	0.028 to 0.028	2020	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	HC1 FKA FKB	0.77 0.7 0.8	0.77 to 0.77 0.7 to 0.7 0.8 to 0.8	2020	No	Water additive which promotes strong teeth
Mercury [1035] (ppb)	2	2	HC1	0.2	0.2 to 0.2	2020	No	Erosion of natural deposits; refineries and factories; landfills; runoff from cropland
Nitrate [1040] (ppm)	10	10	HC1 FKA	1 2.2	1 to 1 2.2 to 2.2	2020	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

Atrazine [2050] (ppb)	3	3	HC1	0.23	BDL to 0.46	2020	No	Runoff from herbicide used on row crops
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Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	HC1	2.11	1.0 to 4.31	2020	No	Naturally present in environment.
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*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.

Chloramines (ppm)	MRDL = 4	MRDLG = 4	VG	2.34 (highest average)	0.29 to 3.10	2020	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	VG	22 (average)	3.5 to 40.9 (range of individual sites)	2020	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	VG	21 (average)	7.9 to 27.5 (range of individual sites)	2020	No	Byproduct of drinking water disinfection.

Household Plumbing Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	VG	0.166 (90 th percentile)	0.007 to 0.263	Aug-19	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	VG	4 (90 th percentile)	0 to 4	Aug-19	No	Corrosion of household plumbing systems

Other Constituents

Turbidity (NTU) TT * Representative samples	Allowable Levels	Source	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% monthly samples	HC1 FKA FKB	0.09 0.246 0.12	100	No	Soil runoff

**Purchased water from Hardin County Water District #2: White Mills WTP (HCA), City Springs (HCB)
Purchased water from Louisville Water Company (LWC) / Hardin County Water District #1 (HC1)**

Regulated Contaminant Test Results Vine Grove Water Department

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants								
Barium [1010] (ppm)	2	2	HCA HCB	0.031 0.036	0.031 to 0.031 0.036 to 0.036	2020 2020	No No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	HCA HCB LWC	0.78 0.5 0.6	0.78 to 0.78 0.5 to 0.5 0.6 to 0.6	2020 2020 2020	No No No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	HCA HCB LWC	2.97 1.44 1.1	2.97 to 2.97 1.44 to 1.44 0.9 to 1.1	2020 2020 2019	No No No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Nitrite [1041] (ppm)	1	1	HCA HCB	0.2 0.2	0.2 to 0.2 0.2 to 0.2	2020 2020	No No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits

Synthetic Organic Contaminants including Pesticides and Herbicides

Atrazine [2050] (ppb)	3	3	HCA	0.33	BDL to 0.33	2020	No	Runoff from herbicide used on row crops
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Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	HCA HCB LWC	2.20 1.26 1.34	1.00 to 4.32 1.00 to 1.67 0.92 to 1.97	2020	No	Naturally present in environment.
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Other Constituents

Turbidity (NTU) TT * Representative samples	Allowable Levels	Source	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% monthly samples	HCA HCB LWC	0.022 0.042 0.07	100	No	Soil runoff

Unregulated Contaminants (UCMR 4)	Source	average	range (ppb)	date
HAA5	HC1	18.361	4.33 to 37.4	2020
HAA6Br	HC1	3.772	2.49 to 8.33	2020
HAA9	HC1	21.991	7.15 to 40.8	2020
HAA5	HC2	16.088	10.4 to 19.9	2020
HAA6Br	HC2	3.4175	26.5 to 5.65	2020
HAA9	HC2	19.5	15.9 to 23.7	2020

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.

This report will not be sent to individual customers. It will be available at City Hall.