

Pendleton County Water District #1 North

Water Quality Report 2018

Water System ID: KY0960348 Manager: Ricky L. King 859-654-6964	CCR Contact: Jaclyn Thompson 859-654-6964	Mailing Address: PO Box 232 Falmouth, KY 41040	Meeting location and time: Water District Office Fourth Friday, monthly at 10 AM
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We purchase treated drinking water from Northern Kentucky Water District – Ft. Thomas treatment plant. The Ft. Thomas plant withdraws surface water from the Ohio River. A susceptibility analysis has been completed and is part of a source water assessment/protection plan. Several areas of concern are related to the extensive development of transportation infrastructure, the potential for spills, high degree of impervious cover and polluted runoff. Areas of row crops and urban and recreational grasses introduce the potential for herbicide, pesticide and fertilizer use –possible non-point source contaminants. Bridges, railroads, ports, waste handlers or generators, and Tier II hazardous chemical users in the area introduce the potential for spills or leaks of hazardous materials into the source water. Landfills and permitted discharges are relatively high in number for the supply area. Other areas of concern include several segments of streams already assessed as having impairments, power lines right-of-way with potential herbicide use, and residential septic systems located throughout the watershed. Since the intakes are in urban areas, the threat of underground storage tanks leaking must also be taken into account. The entire source water assessment report is available at the Northern Kentucky Area Development District at 22 Spiral Drive in Florence, KY 41042 or phone (859)-283-1885.

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.

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.

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. **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 Testing Results for Northern Kentucky Water District – Ft. Thomas Treatment Plant

	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	0.19	100	No	Soil runoff

Regulated Contaminant Test Results Northern Kentucky Water District - Ft. Thomas Plant

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	0.03	0.03 to 0.03	2018	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	0.72	0.72 to 0.72	2018	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.76	0.72 to 0.76	2018	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	2.64 (lowest average)	1.77 to 3.15 (monthly ratios)	2018	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.

Regulated Contaminant Testing Results for Pendleton County Water District #1 North

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Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.2959 (90 th percentile)	0 to 0.3525	Aug-17	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	2.09 (90 th percentile)	0 to 2.13	Aug-17	No	Corrosion of household plumbing systems

Disinfectants/Disinfection Byproducts and Precursors

Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.76 (highest average)	0.5 to 1	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	17 (high site average)	6 to 13 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	65 (high site average)	26 to 103 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.

Level 1 Assessment: A Level 1 assessment is a study of the water system to identify potential problems and determine (if possible) why total coliform bacteria have been found in our water system.

Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially harmful, waterborne pathogens may be present or that a potential pathway exists through which contamination may enter the drinking water distribution system. We found coliforms indicating the need to look for potential problems in water treatment or distribution. When this occurs, we are required to conduct assessment(s) to identify problems and to correct any problems that were found during these assessments.

During the past year we were required to conduct one Level 1 assessment. One Level 1 assessment was completed. In addition, we were required to take three corrective actions and we completed three of these actions.

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 unless requested. Copies are available at our office. If you would like a copy mailed to you please contact our office.

Pendleton County Water District #1 South

Water Quality Report 2018

Water System ID: KY0960499 Manager: Ricky L. King 859-654-6964	CCR Contact: Jaclyn Thompson 859-654-6964	Mailing Address: PO Box 232 Falmouth, KY 41040	Meeting location and time: Water District Office Fourth Friday, monthly at 10 AM
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We purchase treated water from the City of Falmouth. The water source for Falmouth is surface water withdrawn from the Licking River and treated at their facility. A source water assessment has been completed. The following is a summary of the susceptibility analysis that is part of the source water assessment. The susceptibility to contamination is moderate for this portion of the Licking River. Land use in the watershed is mostly residential but also contains some agricultural, recreational, and light industrial activities. There is potential for spills and polluted runoff from areas of row crops and urban and recreational grasses which introduce the potential for herbicide, pesticide and fertilizer contaminants. Bridges, railroads, wastewater discharges and waste handlers in the area introduce the potential for spills or leaks of hazardous materials. Under certain circumstances activities within the watershed could release contaminants and thereby pose potential risks to your drinking water. These activities and how they are conducted are of interest to our customers because they potentially affect public health and the cost of treating your water. The entire source water assessment report is available at the Northern Kentucky Area Development District at 22 Spiral Drive in Florence, KY 41042 or phone (859)-283-1885.

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Regulated Contaminant Testing Results for Falmouth Water Department

	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		0.27	100	No	Soil runoff	
Regulated Contaminant Test Results Falmouth Water Department							
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	0.01	0.01 to 0.01	Feb-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	1.00	1 to 1	Feb-18	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.57	0.57 to 0.57	Jan-18	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	1.27 (lowest average)	1.00 to 1.85 (monthly ratios)	2018	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 Contaminants

Source Water Contaminants (untreated water)							
Cryptosporidium [oocysts/L]	0	TT (99% removal)	1 (positive samples)	12 (no. of samples)	2018	See note below	Human and animal fecal waste

Cryptosporidium. We are required to monitor the source of your drinking water for Cryptosporidium in order to determine whether treatment at the water treatment plant is sufficient to adequately remove Cryptosporidium from your drinking water. Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 1 sample of 12 collected from the raw water source for Falmouth Water Department. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

Regulated Contaminant Testing Results for Pendleton County Water District #1 South

Regulated Contaminant Test Results Pendleton County Water District #1 South							
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Inorganic Contaminants							
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.4 (90 th percentile)	0.0558 to 0.592	Aug-18	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	3.8 (90 th percentile)	0 to 6	Aug-18	No	Corrosion of household plumbing systems
Disinfectants/Disinfection Byproducts and Precursors							
Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.90 (highest average)	0.4 to 1.3	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	59 (high site average)	39 to 72 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	83 (high site average)	38 to 79 (range of individual sites)	2018	YES	Byproduct of drinking water disinfection.

TTHM(ppb) Individual Site	Qtr 1	Qtr 2	Qtr 3	Qtr 4	Violation
002	82.63	70.63	61.13	52.50	Yes
003	83.00	71.25	60.75	53.00	Yes

Violation 2018-7094208

Testing results showed that our system exceeded the standard, or maximum contaminant level (MCL), for trihalomethanes. The standard for trihalomethanes is 0.080 mg/L. It is determined by averaging all samples at each sampling location for the last 12 months. Trihalomethanes averaged at one of our system's locations for:
1/1/2018 through 3/31/2018 was 0.083 mg/L

We are working with our suppliers to minimize the formation of trihalomethanes while ensuring we maintain an adequate level of disinfectant. We have taken additional steps to increase flushing of water lines to determine if our efforts have been effective. We are also monitoring water storage tank levels and water flow patterns within the distribution system. We have since returned to compliance. Public notices were issued for each quarter we were out of compliance.

Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

For more information, please contact Ricky L. King at (859) 654-6964 or PO Box 232, KY 41040.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

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

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