2018 Water Quality Report

Manager: Alan Todd Address: 199 South Main Street Meetings: Nortonville City Hall

Nortonville

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Second Monday of the month at 6:00 pm

Groundwater is the sole source of water for Nortonville Water Works. The city treats water from wells drilled into a confined sandstone aquifer. A wellhead protection plan has been developed and approved by the KY Division of Water. Part of this plan includes a source water assessment. This assessment contains a susceptibility analysis to determine the risk of contamination from various land uses to our water supply. The susceptibility is based on several factors. The well depth and type of aquifer, the proximity of the contaminant sources to the well field, and the nature of the contaminant source. Overall, the susceptibility rating for our source is low. The greatest threat to the aquifer is through injection of waste into existing wells or cross contamination from poorly constructed wells. Under certain circumstances contaminants could be released that would pose challenges to water treatment, or even get into your drinking water. The final source water assessment can be inspected at the Pennyrile Area Development District in Hopkinsville, KY.

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.

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								
Contaminant			Report	5		Date of	Violation	Likely Source of	
[code] (units)	MCL	MCLG	Level			Sample		Contamination	
Inorganic Contaminants									
Arsenic [1005] (ppb)	10	N/A	0.4	0.4	to	0.4	2017	No	Natural erosion; runoff from orchards or glass and electronics production wastes
Barium [1010] (ppm)	2	2	0.027	0.027	to	0.027	2017	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.048 (90 th percentile)	0.0012	to	0.0647	July-17	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	0.6	0.6	to	0.6	2017	No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	2 (90 th percentile)	0	to	5	July-17	No	Corrosion of household plumbing systems
Disinfectants/Disinfection By	products an	d Precursors							•
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.41 (highest average)	0.91	to	1.94	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	1 (high site average)	0 (range o	to f indiv	1 vidual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	4 (high site average)	1 (range o	to f indiv	4 vidual sites)	2018	No	Byproduct of drinking water disinfection.

NOTICE OF VIOLATION 2018 - 9954331 0999 CHLORINE Description of Non Compliance: CHLORINE 0999 Public water system failed to submit distribution CHLORINE residuals for the compliance period 09/01/2017 - 09/30/2017. Page 7 of the Monthly Operational Report (MOR) was not included, which included the monthly distribution residuals. Remedial Measures: Submit page 7 of September MOR. We have submitted the items requested by our primacy agency. We now take use a checklist to comfirm and insure that we are compliant. This NOV will be detailed in the 2018 Consumer Confidence Report (CCR).

NOTICE OF VIOLATION 2019 - 9954334 7500 PUBLIC NOTICE Description of Non Compliance: 401 KAR 8:075 SECTION 2 PUBLIC NOTICE Public water system failed to perform public notice in accordance with 401 KAR 8:075 SECTION 2. **Comments**: Failure to complete a PUBLIC NOTICE for violation (2016-9954324: failure to submit required bacteriological samples for October 2015). Complete, distribute and submit the PUBLIC NOTICE for the above mentioned violation and detail this violation in the next CCR's violation statement list. **Remedial Measures**: Submit proof of public notification and its certification. We have submitted the items requested by our primacy agency. We now take 3 samples monthly when we are only required to take 2. This is to insure compliance. This NOV will be detailed in the 2018 Consumer Confidence Report (CCR).

NOTICE OF VIOLATION 2019 - 9954333 7500 PUBLIC NOTICE Description of Non Compliance: 401 KAR 8:075 SECTION 2 PUBLIC NOTICE Public water system failed to perform public notice in accordance with 401 KAR 8:075 SECTION 2. **Comments:** Failure to complete a PUBLIC NOTICE for violation (2016-9954325: failure to submit required bacteriological samples for November 2015). Complete, distribute and submit the PUBLIC NOTICE for the above mentioned violation and detail this violation in the next CCR's violation statement list. **Remedial Measures**: Submit proof of public notification and its certification. We have submitted the items requested by our primacy agency. We now take 3 samples monthly when we are only required to take 2. We have submitted the items requested by our primacy agency. This NOV will be detailed in the 2018 Consumer Confidence Report (CCR).

NOTICE OF VIOLATION 2019 - 9954332 7500 PUBLIC NOTICE Description of Non Compliance: 401 KAR 8:075 SECTION 2 PUBLIC NOTICE Public water system failed to perform public notice in accordance with 401 KAR 8:075 SECTION 2. **Comments:** Failure to complete a PUBLIC NOTICE for violation (2016-9954326: failure to submit required bacteriological samples for December 2015). Complete, distribute and submit the PUBLIC NOTICE for the above mentioned violation and detail this violation in the next CCR's violation statement list. **Remedial Measures**: Submit proof of public notification and its certification. We have submitted the items requested by our primacy agency. We now take 3 samples monthly when we are only required to take 2. We have submitted the items requested by our primacy agency. This NOV will be detailed in the 2018 Consumer Confidence Report (CCR).

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

Our water system violated one or more drinking water standards over the past year. Even though these were not emergencies, as our customers, you have a right to know what happened and what we did to correct these situations.

We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. During [compliance period] we ['did not monitor or test' or 'did not complete all monitoring or testing'] for [contaminant(s)] and therefore cannot be sure of the quality of your drinking water during that time.

There is nothing you need to do at this time. You do not need to use an alternative (e.g., bottled) water supply.

The table below lists the contaminant(s) we did not properly test for during the last year, how often we are supposed to sample for [this contaminant/these contaminants] and how many samples we are supposed to take, how many samples we took, when samples should have been taken, and the date on which follow-up samples were (or will be) taken.

contaminant	required sampling frequency	number of samples taken	samples should have been taken	when samples were or will be taken	

What happened? Who is at risk? What is being done?

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.