

**2018 Water Quality Report**

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**North Marshall Water District KY0790319**

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**KY0790319**

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6:00 PM Third Thursday of the Month

We at North Marshall Water treat our water. The source for raw water for the Tatumsville Water Treatment Plant, Plant A, is six groundwater wells. There are 74 potential sources of contamination. These sources include an above ground storage tank for diesel fuel, former hog fed lot, and septic systems. All at low risk. The source for raw water for Carter Brien Water Treatment Plant, Plant B, is one groundwater well. There are 74 potential sources of contamination. These sources include a medium risk, a cemetery and 78 acres of pastureland. The high-risk sources are two gas stations, one boat repair shop, one state highway, one sewage treatment plant, and an uncontained closed land fill. A copy of the susceptibility assessment may be seen at the Water District Office where it is open for inspection during regular office hours.

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, ( $\mu\text{g}/\text{L}$ ). 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								North Marshall Water District		KY0790319
Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination			
<b>Inorganic Contaminants</b>										
Barium [1010] (ppm)	2	2	0.0265	0.026 to 0.027	Feb-17	No	Drilling wastes; metal refineries; erosion of natural deposits			
Beryllium [1075] (ppb)	4	4	0.475	0.25 to 0.7	Feb-17	No	Coal-burning factories; metal refineries; electrical, defense, and aerospace industries			
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.42 (90 <sup>th</sup> percentile)	0 to 0.87	Sep-17	No	Corrosion of household plumbing systems			
Fluoride [1025] (ppm)	4	4	0.98	0.95 to 1	Feb-17	No	Water additive which promotes strong teeth			
Lead [1030] (ppb) sites exceeding action level 1	AL = 15	0	0 (90 <sup>th</sup> percentile)	0 to 37	Sep-17	No	Corrosion of household plumbing systems			
Nitrate [1040] (ppm)	10	10	0.36	0.17 to 0.36	Oct-18	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits			
<b>Disinfectants/Disinfection Byproducts and Precursors</b>										
Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.02 (highest average)	0.113 to 1.58	2018	No	Water additive used to control microbes.			
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	1 (high site average)	0 to 2.3 (range of individual sites)	2018	No	Byproduct of drinking water disinfection			
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	7 (high site average)	0 to 14 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.			

### Notice of Violation 2019-992-2027 / 7000 CONSUMER CONFIDENCE REPORT

**Description of Non Compliance:** 401 KAR 8:075, Section 1 CONSUMER CONFIDENCE REPORT (CCR). The public water system failed to submit CCR to Department for Environmental Protection. The system was required to distribute the CCR to customers and submit a copy to the Kentucky Department of Environmental Protection by July 1.

**Comments:** The calendar year 2017 CCR was wholly deficient and will need to have accurate data released. The lead, copper, nitrate, barium, fluoride, HAA, TTHM data were all incorrect. The beryllium data were missing and the IOC's as a whole shown the incorrect month a sampled. The lead and copper were pulled in September 2017, not August 2016. The only data that were correct was the chlorine. The CWS has been emailed correct data as of now. The Notice of Availability was lacking and the CWS had previously been warned about it. Re-release the CY 2017 CCR data, ensuring it is accurate this time. Fix the NOA language for all future CCR's that use electronic method and detail this violation in next year CCR's violation statement list.

**Remedial measures:** This Notice of Violation must be discussed, detailing the nature of the violation, and next year CCR that is due to customers in the department of environmental protection, division of water by July 1, annually.

This report will not be sent to individual customers. It is available at our office.