

North Marshall Water District KY0790319
2019 Water Quality Report

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Meetings: Water District Office / Third Thursday each month at 9:00 am

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North Marshall Water District operates two water treatment plants. Groundwater is pumped from a regional aquifer through seven wells. The raw groundwater requires very little treatment. The water is pH adjusted then disinfection is added to further protect public health. As part of our multi barrier approach to safeguard the public we have assessed land use within the wellhead protection area to better understand potential impacts to water quality and to assign a susceptibility rating. 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. There are 74 potential pollution sources identified within the wellhead protection areas. They include fuel storage, a closed landfill and onsite sewage treatment. The greatest threat comes from roads that transect the protection zones where an accident could cause contaminants to be released and enter the aquifer. Activities and land use within the watershed can pose potential risks to your drinking water. Under certain circumstances, contaminants could be released that would pose challenges to water treatment or contaminate your drinking water. These activities, and how they are conducted, are of interest to the entire community because they potentially affect your health and the cost of treating your water. A copy of the well head protection plan may be reviewed at the Water District Office during normal business 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, (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.**

Regulated Contaminant Test Results

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

Alpha emitters [4000] (pCi/L)	15	0	3.6	3.6 to 3.6	Apr-16	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	0.93	0.66 to 1.2	Apr-16	No	Erosion of natural deposits

Inorganic Contaminants

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
Fluoride [1025] (ppm)	4	4	0.98	0.95 to 1	Feb-17	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.48	0.21 to 0.48	Sep-19	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits

Disinfectants/Disinfection Byproducts

Chlorine (ppm)	MRDL = 4	MRDLG = 4	1.03 (highest average)	0.47 to 1.39	2019	No	Water additive used to control microbes.
TTHM (ppb) (Stage 2) [total trihalomethanes] (Annual Sample)	80	N/A	9 (high site)	0 to 9 (range of individual sites)	2019	No	Byproduct of drinking water disinfection.

Household Plumbing Contaminants

Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	0.42 (90 th percentile)	0 to 0.87	Sep-17	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action level 1	AL = 15	0	0 (90 th percentile)	0 to 37	Sep-17	No	Corrosion of household plumbing systems

Level 1 Assessment Information

During May 2019 we had two positive total coliform results. Subsequent samples collected in the distribution system and from the source were negative. When two or more samples test positive in the same month we are required to perform a Level 1 Assessment and submit the report to the Division of Water. 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(s). One Level 1 assessment(s) were completed. In addition, we were required to take one corrective actions and we completed one of these actions.

Violation: Monitoring & Reporting (2019-800)

We received a violation on 12/14/2018 for failing to collect the correct number of drinking water samples during the 7/1/18 - 9/30/18 compliance period. We monitor for Total Trihalomethane and Total Haloacetic Acids as a measure of disinfection by-product formation. During this period the samples were collected; however, our contract laboratory incorrectly dated the official state reporting form for one of the two samples. This issue has been resolved and the sample results have been accepted by the KY Division of Water. We have since been returned to compliance. There are no health effects associated with this violation.

PUBLIC NOTIFICATION

North Marshall Water District – System ID# KY KY0790319

On 12/14/2018 we became aware that our system failed to collect the correct number of drinking water samples. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we did (are doing) to correct this situation.

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 7/1/18 – 9/30/18 we did not complete all monitoring or testing for Total Trihalomethane and Total Haloacetic Acids and therefore cannot be sure of the quality of your drinking water during that time.

What should I do?

There is nothing you need to do at this time. You may continue to drink the water. If a situation arises where the water is no longer safe to drink, you will be notified within 24 hours.

What is being done?

We collected the samples; however, our contract laboratory incorrectly dated the official Kentucky Division of Water (DOW) reporting form for one of the two samples. This issue has been resolved and the sample results have been accepted by DOW. We have since been returned to compliance.

For more information, please contact Bobby Gifford at 270-527-3208 or 96 Carroll Rd., Benton, KY 42025

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.