



Water - Essential for Life

North Mc Lean County Water District Water Quality Report for year 2014

KY0300320

P O BOX 68
LIVERMORE, KY 42352
Meetings: 217 HILL STREET, LIVERMORE, KY 42352
Meeting Dates and Time: 3RD MONDAY OF EACH MONTH 7:00PM

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This report is designed to inform the public about the quality of water and services provided on a daily basis. Our commitment is to provide our customers with a safe, clean, and reliable supply of drinking water. We want to assure that we will continue to monitor, improve, and protect the water system and deliver a high quality product. Water is

the most indispensable product in every home and we ask everyone to be conservative and help us in our efforts to protect the water source and the water system. We purchase the majority of our water from the City of Calhoun which draws its water from the Green River that is a surface water. Brief Source Water Assessment Summary indicates overall susceptibility is generally moderate. Potential sources of concern include: bridges, row crops, water plant, 6 major roads, 14 oil and gas wells, woodlands, agricultural activity. Our second largest supplier of water is West Daviess County Water District. They purchase water from Owensboro Municipal Utilities(OMU). The source for OMU is ground water wells on the Ohio River Alluvium(sand and gravel) in Daviess County. An analysis of the overall susceptibility to contamination of the Owensboro Municipal Utilities' water supply indicated that this susceptibility is moderate. Sources of potential impact include: above ground storage tanks, underground tanks, professional offices, dry cleaners, food service facilities, quarries, hazardous material storage, and municipal land use. Susceptibility Analysis Reports are available at the Green River Area Development District(GRADD)(270-926-4433).

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).

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.

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>.

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. Unless otherwise noted, the report level is the highest level detected.

A= Calhoun Water Works, B=West Daviess County Water District (OMU, Owensboro Municipal Utilities, C= North Mc Lean County Water District

	Allowable Levels		Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity
Turbidity (NTU) TT	No more than 1 NTU*		A=	0.28	100	NO	Soil runoff
* Representative samples of filtered water	Less than 0.3 NTU in 95% monthly samples		B=	0.19	100	NO	

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Source	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Microbiological Contaminants								
Total Coliform Bacteria	1	0	C=	1	N/A	Jan-14	NO	Naturally present in the environment
# or % positive samples			C=	1		May-14	NO	
			C=	1		Dec-14	NO	

Radioactive Contaminants

Alpha emitters [4000] (pCi/L)	15	0	B=	3.1	0 to 3.1	June-09	NO	Erosion of natural deposits
Combined radium (pCi/L)	5	0	A=	1.5	1.5 to 1.5	July-14	NO	Erosion of natural deposits
			B=	0.2	0 to 0.2	June-14	NO	
Uranium (µg/L)	30	0	A=	2.2	2.2 to 2.2	July-14	NO	Erosion of natural deposits

Inorganic Contaminants

Arsenic [1005] (ppb)	10	N/A	B=	3.8	1.8 to 3.8	2014	NO	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium [1010] (ppm)	2	2	A=	0.024	0.017 to 0.024	Jan-14	NO	Drilling wastes; metal refineries; erosion of natural deposits
			B=	0.024	0.017 to 0.024	2014	NO	
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	C=	0.047 (90 th percentile)	0 to 0.12	July-14	NO	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	A=	0.8	0.6 to 0.9	Aug-14	NO	Water additive which promotes strong teeth
			B=	0.73	0.73 to 0.73	June-14	NO	
Lead [1030] (ppb) sites exceeding action level 1	AL = 15	0	C=	2 (90 th percentile)	0 to 19	July-14	NO	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	A=	1.4	1.4 to 1.4	Feb-14	NO	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	B=	11	2.5 to 11	2014	NO	Discharge from petroleum and metal refineries; erosion of natural deposits; discharge from mines

Disinfectants/Disinfection Byproducts and Precursors

Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	A=	1.65	1.08 to 2.38	N/A	NO	Naturally present in environment.
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*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average of the monthly ratios must be 1.00 or greater for compliance.

Chlorine (ppm)	MRDL = 4	MRDLG = 4	C=	1.28 (highest average)	0.81 to 1.84	N/A	NO	Water additive used to control microbes.
HAA (ppb) Stage 2 [Haloacetic acids] (Individual Sites)	60	N/A	C=	39 (4th Quarter 2013)	22 to 48 (range of individual sites)	N/A	No	Byproduct of drinking water disinfection
TTHM (ppb) Stage 2 [total trihalomethanes] (Individual Sites)	80	N/A	C=	43 (4th Quarter 2013)	22 to 65	N/A	NO	Byproduct of drinking water disinfection.

Unregulated Contaminants (UCMR 3)

	average	range (ppb)	date
1,4-Dioxanne	B= 0.27	0 to 26	2014
Chlorate	B= 26	26 to 26	2014
Chromium	B= 1.5	0.85 to 1.5	2014
Chromium 6	B= 1.4	0.84 to 1.4	2014
Molybdenum	B= 140	2.7 to 140	2014
Strontium	B= 110	77 to 110	2014
Vanadium	B= 0.98	0.54 to 0.98	2014

EPA has not established drinking water standards for unregulated contaminants. There are no MCL's and therefore no violations if found.

Our water system as sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standards set by EPA. The purpose of monitoring for these contaminants is to help EPA the side whether the contaminants 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.

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 the 02/01/2014-02/28/2014 compliance period we did not complete all monitoring or testing for COLIFORM (TCR) and therefore cannot be sure of the quality of our 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
COLIFORM (TCR)	5 per month	4 per month	5	N/A

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

We failed to complete all the required tests of our drinking water for COLIFORM (TCR) during the period of 02/01/2014-02/28/2014. We were required to take 5 COLIFORM samples in February 2014. Only 4 were taken. This one additional sample was required due to the positive samples in January. There were no health effects due to this oversight. However, the water quality for this period in time is unknown. Remedial actions included performing public notification and the required certification. We also received a Notice of Violation (NOV) in March of 2014. Our system neglected to turn in a Public Notice Certification form to KY Division of Water that was due August 2013. There were no health effects due to this oversight. Remedial actions included performing public notification and the required certification.

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.

We received a Notice of Violation (NOV) in March of 2014. Our system neglected to turn in a Public Notice Certification form to KY Division of Water that was due August 2013. There were no health effects due to this administrative oversight. The Public Notice Certification form was sent in and received by our primacy agency by 03/22/14. Other remedial actions included detailing this NOV in the 2014 Consumer Confidence Report.