



Water - Essential for Life

Muhlenberg County Water District #3 Water Quality Report for year 2011

P.O. Box 67
Brownsville, Ky. 42325

Meetings: 4789 Main Street
Meeting Dates and Time: 3rd Monday of each Month, 7:00p.m.

KY0890304

Manager:	Ben Tooley
Phone:	270-525-6333
CCR Contact:	Cindy Darr
Phone:	270-525-6333

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.

Muhlenberg Co. Water District #3 purchases water from Central City Municipal Water and Sewer, who draws surface water from the Green River. The final source water assessment has been completed and is contained in the Muhlenberg County Water Supply Plan prepared by the Pennyrile Area Development District. The area upstream contains residential, agricultural, and mining activities. The source water assessment identified 246 potential sources of contamination with 208 of those sites identified as moderate risk. However, several sites were identified as high risk. There are twenty-five oil/gas wells and ten landfills which present the possibility of contamination from leaking, storage and illegal dumping. There are ten underground storage tanks facilities and three auto repair facilities which have the potential for contamination due to leaking petroleum containers and spills. Other potential concerns within the watershed are roads, bridges, and highways which pose a risk due to the possibility of hazardous materials entering the water supply from traffic accidents, spills and illegal dumping. Copies of the plan are available at the Central City Water Department.

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 discharge, 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, dry cleaners, waste water treatment, or septic systems); Radionuclides, (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's IX 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.

None Detection Levels (NDL) - 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 \$10,000,000,000.

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 measured because it is a good indicator of the effectiveness of the filtration system.

Variance & 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 must 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. Tradúcelo o háble con alguien que lo entienda bien.

This table is provided to the consumer for their review. It includes information about drinking water quality from 4Q, 2010. EPA's Clean Water Rule allows one sample per year. The data is based on sampling requirements for certain contaminants which often fluctuate over time because levels can change. These contaminant levels are not expected to vary significantly from year to year. Some of the data is historical, though representative, may be more than one year old. Unless otherwise stated, the report level is the higher, most recent.

	Average Level	Score	Highest Single Measurement	Level	Violation	Likely Source of Toxicity
Total Dissolved Solids (TDS)	Less than 1,000 mg/L	B+	0.022	100	No	Natural
* Representativeness of Sampled Value	Less than 0.1 MCL in one monthly samples	C+				

Regulated Contaminant Test Results

Contaminant	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Likely Source of Contamination
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Inorganic Contaminants

Barium			A+	0.005	0.015 to 0.025	Oct-10	No	Drilling wastes, coal ash, mine tailings, natural deposits.
Chloride (ppm)	2	2	B+	10	2.013 to 10			
Chlorine (ppm) (disinfecting agent level)	MCL = 1.0	1.0	(5% percentile)	0.002 to 0.024	Jul-10	No	Chemical treatment, chlorine source.	
Chromium (ppm)	—	—	A+	1	0.75 to 1.0	Jan-11	No	Water additive, water treatment, steel mill.
Lead (ppm) (drinking water action level)	MCL = 15	15	B+	2	1 to 2	Jul-10	No	Corrosion of lead pipes, plumbing fixtures.
Nitrate (ppm)	10.0	10	A-	1.6	1.6 to 1.6	Jan-11	No	From fertilizer use, leaching from septic tanks, sewage, wastes.
Nitrite (ppm)	10.0	10	B	1.6	1.6 to 1.6	Jan-11	No	From fertilizer use, leaching from septic tanks, sewage, wastes.
Potassium	2	2.5	A+	0.9	0.7 to 0.9	Oct-10	No	Leaching from soil, processing sites, discharge from domestic uses.

Synthetic Organic Contaminants including Pesticides and Herbicides

Styrene			A-	0.5	50L to 12	Jan-11	No	Runoff from herbicide used on row crops.
Trichloroethylene	3	3	B-	12	12			

Volatile Organic Contaminants

Disinfectants/Disinfection Byproducts and Precursors								
Total Organic Carbon (TOC)	MCL	MCLG	Avg	Range	Unit	Date of Sample	likely Source/Concern	
Total organic carbon (range of monthly results)	100	N/A	B+	1.0	0.07 to 1.0	N/A	No	
Monochloroethane (the 5% TOC result is related to the % TOC to total applied. Actual range of the monthly may be 100% greater than compliance.)								
Chlorine (ppm)	MCL = 4	MCLG = 4	1.0	(5% percentile)	1.00 to 1.00	N/A	No	Water addition to control chlorine.
TCA (ppm) (in excess disinfectant residual)	10	N/A	(5% percentile)	71	71 to 74	N/A	No	Byproduct of chlorine water disinfection.
2,4,4,5-Tetrachloro-2,5-dihydrofuran (total trihalogenated)	10	N/A	(5% percentile)	25	25 to 125	N/A	No	Byproduct of drinking water disinfection.

PPU has not established drinking water standards for unregulated contaminants. There were no MCL's and therefore no violations found. Secondary contaminants do not have a direct impact on the health of consumers and are not required in the Consumer Confidence Report. They are being included to provide additional information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Aluminum	0.05 to 0.2 mg/L	B+	0.17 to 0.17	Aug-11
Chloride	250 mg/L	20.4	20.4 to 20.4	Aug-11
Chlorine	5.0 mg/L	1	1 to 1	Aug-11
Copper	1.3 mg/L	0.002	0.002 to 0.002	Aug-11
Fluoride	2.0 mg/L	0.8	0.8 to 0.8	Aug-11
Iron	0.5 mg/L	0.1	0.1 to 0.1	Aug-11
Manganese	0.02 mg/L	0.002	0.002 to 0.002	Aug-11
Oil & Grease (dissolved organic matter)	—	1	1 to 1	Aug-11
pH	6.5 to 8.5	7.9	7.9 to 7.9	Aug-11
Silica	0.1 mg/L	0.002	0.002 to 0.002	Aug-11
Sulfide	250 mg/L	81	81 to 81	Aug-11
T-THM Disolved Solid*	500 mg/L	200	200 to 200	Aug-11
Zinc	5 mg/L	0.002	0.002 to 0.002	Aug-11

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Sodium	below detection limit	12.8	12.8 to 12.8	Aug-11