

# Martin County Water District

## Water Quality Report 2018

Water System ID: KY0800273  
Manager: Greg Scott  
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Meeting location and time:  
Water District Office  
Fourth Monday at 4:00 PM

Martin County Water District treats surface water withdrawn from Crum Reservoir and replenished from Tug River. Additional finished water was purchased from Prestonsburg Utilities to supply water to the Industrial Park. The source for Prestonsburg is surface water from the Levisa Fork of the Big Sandy River. Potential contaminant sources of concern include major roads, bridges and culverts. Other potential impacts include the coal industry, oil and gas industries, and straight pipes. Many of the potential contaminant sites are located along the Tug Fork of the Big Sandy. With each rainfall, herbicides, pesticides, fertilizers, animal manure and household chemicals are washed from impervious surfaces and other land areas into storm drains, ditches, sinkholes or streams that flow into our nearby waterways. Source Water Assessment Plans have been developed for both water systems. The assessments are available for review at each of the respective water system offices and/or local public libraries.

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).

### 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>.

### 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.

Spanish (Español) Este informe contiene información muy importante sobre la calidad de su agua beber. Tradúzcalo o hable con alguien que lo entienda bien.

<p>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.</p> <p><b>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.</b></p>								
<b>M=Martin County      P=Prestonsburg</b>								
	Allowable Levels	Source	Highest Single Measurement	Lowest Monthly %	Violation	Likely Source of Turbidity		
Turbidity (NTU) TT * Representative samples of filtered water	No more than 1 NTU* Less than 0.3 NTU in 95% monthly samples	M= P=	0.337 0.297	99 100	No No	Soil runoff		
<b>Regulated Contaminant Test Results</b>								
Contaminant [code] (units)	MCL	MCLG	Source Level	Report of Detection	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
<b>Radioactive Contaminants</b>								
Beta photon emitters (pCi/L)	50	0	P=	2.08	2.08 to 2.08	May-17	No	Decay of natural and man-made deposits
Alpha emitters [4000] (pCi/L)	15	0	P=	2.15	2.15 to 2.15	May-17	No	Erosion of natural deposits
Combined radium (pCi/L)	5	0	P=	1.317	1.317 to 1.317	May-17	No	Erosion of natural deposits
Uranium (µg/L)	30	0	P=	0.268	0.268 to 0.268	May-17	No	Erosion of natural deposits
<b>Inorganic Contaminants</b>								
Barium [1010] (ppm)	2	2	M=	0.02	0.02 to 0.02	Apr-18	No	Drilling wastes; metal refineries; erosion of natural deposits
Copper [1022] (ppm) sites exceeding action level 0	AL = 1.3	1.3	M=	0.018 (90 <sup>th</sup> percentile)	0.004 to 0.045	Aug-17	No	Corrosion of household plumbing systems
Fluoride [1025] (ppm)	4	4	M= P=	0.98 0.97	0.98 to 0.98 0.97 to 0.97	Apr-18 May-18	No No	Water additive which promotes strong teeth
Lead [1030] (ppb) sites exceeding action level 0	AL = 15	0	M=	2.7 (90 <sup>th</sup> percentile)	1.2 to 3.7	Aug-17	No	Corrosion of household plumbing systems
Nitrate [1040] (ppm)	10	10	M= P=	0.5 0.45	0.5 to 0.5 0.45 to 0.45	Oct-18 Aug-18	No No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Selenium [1045] (ppb)	50	50	P=	7	7 to 7	May-18	No	Discharge from petroleum and metal refineries or mines; erosion of natural deposits
<b>Synthetic Organic Contaminants including Pesticides and Herbicides</b>								
Hexachlorocyclopentadiene [2042] (ppb)	50	50	P=	0.11	0.11 to 0.11	Aug-18	No	Discharge from chemical factories
PCB's (Polychlorinated biphenyls) [2383] (ppt)	500	0	P=	120	120 to 120	Oct-18	No	Runoff from landfills; discharge of waste chemicals
<b>Disinfectants/Disinfection Byproducts and Precursors</b>								
Total Organic Carbon (ppm) (report level=lowest avg. range of monthly ratios)	TT*	N/A	M= P=	2.78 1.23	1.48 to 2.62 1 to 1.99	2018 2018	No No	Naturally present in environment.
*Monthly ratio is the % TOC removal achieved to the % TOC removal required. Annual average must be 1.00 or greater for compliance.								
Chlorine (ppm)	MRDL = 4	MRDLG = 4	M=	1.25 (highest average)	0.12 to 1.71	2018	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	M=	46 (average)	18.5 to 74.4 (range of individual sites)	2018	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	M=	55 (average)	15 to 94 (range of individual sites)	2018	No	Byproduct of drinking water disinfection.
<b>Other Contaminants</b>								
Cryptosporidium [oocysts/L]	0	TT (99% removal)	M= P=	1 3 (positive samples)	9 9 (no. of samples)	2018 2018	See Crypto Note	Human and animal fecal waste

Cryptosporidium is a microbial pathogen found in surface water. Cryptosporidium was detected in 3 samples of 9 collected from the raw water source for Prestonsburg Utilities and 1 sample of 9 collected from the raw water source for Martin County Water District. It was not detected in the finished water. Current test methods do not enable us to determine if the organisms are dead or if they are capable of causing disease. Symptoms of infection include nausea, diarrhea, and abdominal cramps. Cryptosporidium must be ingested to cause disease and it may be spread through means other than drinking water.

Unregulated Contaminants (UCMR 4)		average	range (ppb)	date
HAA5	P=	68.525	57.4 to 90	Oct-18
HAA6Br	P=	3.115	2.45 to 4.75	Oct-18
HAA9	P=	71.65	59.8 to 94.8	Oct-18

Your drinking water from Prestonsburg Utilities has been sampled for a series of unregulated contaminants. Unregulated contaminants are those for which EPA has not yet established drinking water standards. There are no MCLs and therefore no violations if found. The purpose of monitoring for these contaminants is to help EPA determine where the contaminants occur and whether they 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.

**Violation 2018-9951192**

We received a violation for submitting our April 2018 Monthly Operating Report to the Division of Water past the deadline. The Monthly Operating Report contains a summary of daily activities at the water system, including chemicals used and contaminants monitored. We did not submit the April 2018 MOR before May 10. It was submitted 5/16/2018. There is nothing you need to do. We returned to compliance immediately upon submitting the report to Division of Water. We are now making sure to mail all compliance documentation on time.

**Violation 2019-9951193**

We received a violation for not submitting a certification package to the Division of Water regarding the Public Notice we distributed for violation 2016-9951181. When asked for the documentation, we submitted it. We are now sending all compliance paperwork into the Division of Water using certified mail so as to have proof of delivery of certification and compliance documents.

**Violation 2019-9951194**

We received a violation for not submitting a certification package to the Division of Water regarding the Public Notice we distributed for violation 2016-9951186. When asked for the documentation, we submitted it. We are now sending all compliance paperwork into the Division of Water using certified mail so as to have proof of delivery of certification and compliance documents.

This report will not be mailed unless requested. Copies are available at our office. If you would like to receive a copy by mail, please contact our office.