SOUTHERN MADISON WATER DISTRICT
P.O. BOX 220
BEREA, KY 40403

Return Service Requested

Water Quality Report 2015

Water System ID: KY0760407
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Meeting location and time:
207 North Dogwood Drive
Third Tuesday Monthly at 7:00 PM

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 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.

SMWD purchases water from Berea Municipal Utilities. Berea Municipal Utilities treats surface water from four reservoirs, Upper Silver Creek, Lower Silver Creek, Cowbell and Owsley Fork Lakes. The final source water assessment for our system has been completed and is contained in the Madison County Source Water Assessment & Protection Plan. An analysis of the susceptibility of the Berea water supply to contamination indicates that susceptibility is generally moderate. However, there are some areas of high concern within the protection zones of the Upper and Lower Silver Creek reservoirs, as well as with the protection zone of Cowbell Lake. Forested areas within these protection zones hold the potential to generate runoff that could carry natural contaminants from the forest floor. Within the protection zone for Owsley Fork reservoir, forest areas are also present and are noted as a significant contamination threat to this source. Segments of four major roads (KY 2004, KY 3447, US 421, and KY 21) also occur within this protection zone--each perceived as medium-level threats to the reservoir supply. A copy of the plan is available for review at the Berea Municipal Utilities 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).

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.

Quality On Tap!
Our Commitment Our Profession

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.

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

Regulated Contaminant Test Results

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Barium [1010] (ppm)	2	2	0.12	0.12 to 0.12	Apr-15	No	Drilling wastes; metal refineries; erosion of natural deposits
Fluoride [1025] (ppm)	4	4	1	1 to 1	Apr-15	No	Water additive which promotes strong teeth
Nitrate [1040] (ppm)	10	10	0.26	0.26 to 0.26	Apr-15	No	Fertilizer runoff; leaching from septic tanks, sewage; erosion of natural deposits
Total Organic Carbon (ppm) (measured as ppm, but reported as a ratio)	TT*	N/A	1.49 (lowest average)	1.19 to 1.95 (monthly ratios)	2015	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.

	Average	Range of Detection
Fluoride (added for dental health)	0.9	0.77 to 1.14
Sodium (EPA guidance level = 20 mg/L)	2.9	2.9 to 2.9

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 addition information about the quality of the water.

Secondary Contaminant	Maximum Allowable Level	Report Level	Range of Detection	Date of Sample
Chloride	250 mg/l	5.9	5.9 to 5.9	Mar-15
Corrosivity	Noncorrosive	-0.52	N/A	Mar-15
Fluoride	2.0 mg/l	0.78	0.78 to 0.78	Mar-15
Odor	3 threshold odor number	1	1 to 1	Mar-15
pH	6.5 to 8.5	7.5	7.5 to 7.5	Mar-15
Sulfate	250 mg/l	9.2	9.2 to 9.2	Mar-15
Total Dissolved Solids	500 mg/l	100	100 to 100	Mar-15

Southern Madison Water District have sampled for a series of unregulated contaminants. Unregulated contaminants are those that don't yet have a drinking water standard set by EPA. The purpose of monitoring for these contaminants is to help EPA decide 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.

Unregulated Contaminants (UCMR 3)	average	range (ppb)	date
vanadium	0.060	BDL to 0.26	Sep-15
strontium	35.250	BDL to 82	Dec-14
chromium-6	0.032	0 to 0.095	Sep-15
total chromium	0.054	BDL to 0.23	Jun-15

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

Copies are available at our office. If you desire a copy to be mailed to you please contact our office.

Regulated Contaminant Test Results - Southern Madison Water District

Contaminant [code] (units)	MCL	MCLG	Report Level	Range of Detection	Date of Sample	Violation	Likely Source of Contamination
Total Coliform Bacteria # or % positive samples	1	0	2	N/A	2015	Yes	Naturally present in the environment
Copper [1022] (ppm) sites exceeding action lev 0	AL = 1.3	1.3	0.19 (90th percentile)	0 to 0.44	Jul-15	No	Corrosion of household plumbing systems
Lead [1030] (ppb) sites exceeding action lev 0	AL = 15	0	0 (90th percentile)	0 to 5.8	Jul-15	No	Corrosion of household plumbing systems
Chlorine (ppm)	MRDL = 4	MRDLG = 4	0.87 (highest average)	0.4 to 1.6	2015	No	Water additive used to control microbes.
HAA (ppb) (Stage 2) [Haloacetic acids]	60	N/A	54 (high site average)	8 to 83 (range of individual sites)	2015	No	Byproduct of drinking water disinfection
TTHM (ppb) (Stage 2) [total trihalomethanes]	80	N/A	64 (high site average)	29 to 106 (range of individual sites)	2015	No	Byproduct of drinking water disinfection.

Violation 2016-9950108 (TCR):
We received a MCL violation for total coliform bacteria being present in bacteriological samples for the compliance period 08/01/2015 to 08/31/2015. We took a total of 21 routine and repeat samples. Two of the samples showed the presence of coliform bacteria. Coliforms are bacteria that are naturally present in the environment and are used as an indicator that other, potentially-harmful, bacteria may be present. Coliforms were found in more samples than allowed and this was a warning of potential problems. The standard is that no more than one sample per month may do so. Whenever we detect coliform bacteria in any sample, we do follow-up testing to see if other bacteria of greater concern, such as fecal coliform or E. coli, are present. We did not find any of bacteria in our subsequent testing.

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.