

BEAVER FALLS MUNICIPAL AUTHORITY

Este informe contiene informacion muy importante sobre su agua beber. Traduzcalo o hable con alguien que lo entienda bien.



The Beaver Falls Municipal Authority (BFMA) is pleased to present to you the WATER QUALITY REPORT for 2012. This report is designed to inform you about the quality water and services we deliver to you every day.

All of our water comes from the Beaver River, which is formed by the confluence of the Mahoning and Shenango Rivers near New Castle. There are also several smaller tributaries, including the Connoquenessing Creek, Pymatuning Creek, and Brush Creek, that feed into the watershed that supplies our water treatment plant.

A 'Source Water Assessment' of our source water was completed in May, 2002. The assessment has found that the Beaver River is potentially susceptible to accidental spills along roads and railways that border the river for almost its entire length. Overall, our source water has a high risk of significant contamination. Summary reports of the assessment can be viewed over the internet by going to the PA DEP's Source Water Assessment & Protection Web page at: <http://www.dep.state.pa.us/dep/deputate/watermgmt/wc/Subjects/SrceProt/SourceAssessment/default.htm> or by contacting the Beaver Falls Municipal Authority. Copies of the complete report are available for review at the PA DEP Pittsburgh Regional Office, Records Management Unit which can be contacted at 412-442-4000.

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).

In order to ensure that tap water is drinkable, the EPA has set limits through regulations for certain contaminants in



The new maintenance facilities were completed in 2011.

drinking water provided by public water systems. These MCL's {maximum contaminant levels} are set at very low levels because of potential adverse health effects to the general public. The Beaver Falls Municipal Authority routinely monitors for contaminants in your drinking water according to Federal and State laws. The following tables show the results of our monitoring for the period of January 1 to December 31, 2012. In the following tables, you will find many terms and abbreviations you may not be familiar with. To help you better understand these terms we have provided the following definitions:

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.

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Running Annual Average (RAA) - mathematical average of analytical data in which four quarterly or twelve monthly results are continuously averaged.

Nephelometric Turbidity Unit (NTU) - nephelometric turbidity unit is a measure of the clarity of water. Turbidity in excess of 5 NTU is just noticeable to the average person.

Action Level (AL) - the concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Treatment Technique (TT) - a required process intended to reduce the level of a contaminant in drinking water.

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 that is 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.

Minimum Residual Disinfectant Level (MinRDL) - The minimum level of residual disinfectant required at the entry point to the distribution system.

Disinfectant - the chemical additive or process that is used to kill or inactivate pathogens that may be present in the water.

EXPLANATION OF VIOLATIONS

Beaver Falls Municipal Authority had the following violations in 2012. All violations may be reviewed at the DEP web site www.dep.state.pa.us/dep and include the following:

1. The 4th Quarter, 2012, TOCs (Total Organic Carbon) running annual average (RAA) dropped below required PA DEP removal ratio. *See the attached Public Notification.*
2. Incorrect reporting for TTHM's (Total Trihalomethanes) and Haloacetic Acids. *These samples were taken as directed by DEP, however due to laboratory errors, the results were not submitted to the DEP in an appropriate format.*

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IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER

Este informe contiene información importante acerca de su agua potable. Haga que alguien lo traduzca para usted, o hable con alguien que lo entienda.

The BEAVER FALLS MUNICIPAL AUTHORITY's Removal of Total Organic Carbon (TOC) Does NOT Meet Safe Drinking Water Standards

Our water system recently violated a drinking water standard. Although this incident was not an emergency, as our customers, you have a right to know what happened and what we are doing to correct this situation.

We routinely monitor for drinking water contaminants. Testing results from samples collected monthly during 2012 show that our system did not meet the standard for Total Organic Carbon running annual average removal for the last calendar quarter of 2012. The standard for TOC removal is based upon a running annual average (RAA) of removal ratios, calculated quarterly: percent of actual removal of TOC from raw water to the required removal. A ratio greater than 1.00 is acceptable. Our RAA ratio was greater than 1.00 for all quarters of 2012 except the fourth quarter (October-December) when it fell to 0.981.

What should I do?

You do not need to use an alternative (e.g., bottled) water supply. However, if you have specific health concerns, consult your doctor.

What does this mean?

This is not an immediate risk. If it had been, you would have been notified immediately. *Total organic carbon (TOC) has no health effects. However, the presence of TOC in the water can contribute to formation of disinfection byproducts. Drinking water containing these byproducts in excess of the MCL may lead to adverse health effects, liver or kidney problems, or nervous system effects, and may lead to an increased risk of getting cancer.* Last year, the byproduct levels in our water remained well below the MCL, so the TOC removal ratio did not cause any violations for disinfection byproducts.

What happened?

There is no way to pinpoint a single specific reason that the TOC removal ratio was not met during the last few months of 2012. It is a complex combination of many things including river conditions, water chemistry, plant operations, sampling practices, and testing methods. In fact, we are so close to being in compliance with the TOC removal ratio requirement, that our TOC removal ratios could just as easily have been compliant values if the same samples were tested again.

What was done?

We are taking this matter very seriously and have already started to take additional samples, evaluate other testing methods, optimize our treatment process, and revise our sampling locations to take full advantage of TOC removal across our treatment process. We anticipate resolving the current TOC removal ratio problem within the next month with adjustments to the existing process and additional sampling.

Over two years ago, the Authority recognized the need to make changes at the treatment plant to remove a higher percentage of TOC and began the steps of planning, design, permitting and funding. Construction is about to start on a \$2 Million project to renovate the primary clarifiers at the treatment plant. The project will result in an improved water treatment process and enhanced TOC removal. The project will continue throughout 2013.

For more information, please contact our office at 724-846-2400 X231.

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.

This notice is being sent to you by Beaver Falls Municipal Authority.

PWS ID#: 5040012

Date distributed: 2/13

Tables

Turbidity Data							
Contaminant (Units)	Sample Date	Violation (Y/N)	Level Detected	MCLG	MCL	Likely Source of Contamination	
Turbidity (NTU)	Continuous Monitoring	N	100% (a)	0	TT = At least 95% of samples below 0.3		Soil Runoff
			0.116 (5/9/12)	N/A	TT = 1 NTU for a single measurement		
Inorganic, Synthetic, and Volatile Organic Contaminants							
Contaminant (Units)	Sample Date	Violation (Y/N)	Level Detected	Range	MCLG	MCL	Likely Source of Contamination
Copper (ppm)	June 2010	N	0.154 (b)	0.0 – 0.41	1.3	AL = 1.3	Corrosion of household plumbing, erosion of natural deposits
Lead (ppb)	June 2010	N	0.0 (b)	0.0 – 49.0	0.0	AL = 15.0	Corrosion of household plumbing, erosion of natural deposits
Nitrate (ppm)	June 2012	N	0.75	0.0-0.75	10.0	10.0	Runoff from fertilizer use, Leaching from septic tanks and sewage, erosion of natural deposits
Barium (ppm)	March 2012	N	0.036	N/A	2	2	Discharge of drilling wastes, metal refineries; erosion of natural deposits
Atrazine (ppb)	May 2012	N	0.3	N/A	0	3	Runoff from herbicide used on row crops
Fluoride (ppm)	Sept. 2012	N	0.74	0.61-0.74	2	2	Erosion of natural deposits; Additive to promote strong teeth; discharge from fertilizer and aluminum factories
Distribution Disinfectant & Disinfection By-Products							
Contaminant (Units)	Sample Date	Violation (Y/N)	Highest RAA	Range	MCLG	MCL	Likely Source of Contamination
Chlorine (ppm)	Sampled Monthly	N	1.26 (c)	0.90-1.26	4.0 = MRDLG	4.0 = MRDL	Water additive to control microbes
Chloramines (ppm)	Sampled Monthly	N	1.03 (c)	0.01-3.61	4.0 = MRDLG	4.0 = MRDL	Water additive to control microbes
Haloacetic Acids (ppb)	Sampled Quarterly	N	21.3	5.28-38.2	N/A	60	By-product of disinfection
Total Trihalomethanes (ppb)	Sampled Quarterly	N	53.7	13.8-96.7(e)	N/A	80	By-product of disinfection
Entry Point Disinfection Residual							
Contaminant (Units)	Sample Date	Violation (Y/N)	Lowest Level Detected	Range of Detections	MinRDL	Likely Source of Contamination	
Chlorine (ppm)	Continuous Monitoring (Low in Mar. 2012)	N	0.73	0.73-3.83	0.2	Water additive to control microbes	
Total Organic Carbon							
Contaminant	Sample Date	Violation (Y/N)	Range of % Removal Required	Range of % Removal Achieved	# of Quarters out of Compliance	Likely Source of Contamination	
Total Organic Carbon	Sampled Monthly	N	25-45	0.0—42.0	1(d)	Naturally decaying organic matter	

(a) The lowest monthly percentage of samples meeting the turbidity limits specified by DEP regulations

(b) These are 90th percentile results. One of the forty-six samples for lead exceeded the minimum action level. None of the forty-six copper samples exceeded the action level.

(c) DEP regulations require that a 'detectable' amount of disinfectant be maintained in the distribution system at all times.

(d) See Public Notification

(e) Some people who drink water containing trihalomethanes in excess of the MCL over many years may experience problems with their liver, kidneys, or central nervous systems, and may have an increased risk of getting cancer.

**BEAVER FALLS
MUNICIPAL AUTHORITY**
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HEALTH INFORMATION:

All drinking water, including bottled water, may be reasonably expected to contain at least small amounts of some contaminants. The presence of these contaminants does not necessarily indicate that the water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791). These contaminants can be microbes, organic or inorganic chemicals, or radioactive materials. Examples of these contaminants are viruses and bacteria from sewage or septic systems and salts and metals from industrial or domestic wastewater discharges. Pesticides and herbicides from agricultural and urban runoff can also be detected periodically in trace amounts. In addition to these, organic chemical contaminants that can come from gas station run-off or from industrial processes such as petroleum production may also be found at times in trace amounts.

IMPORTANT INFORMATION ABOUT YOUR DRINKING WATER:

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. The BFMA 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 www.epa.gov/safewater/lead.

BOARD MEETINGS:

We at the Beaver Falls Municipal Authority work around the clock to provide top quality water to every tap. In addition to the contaminants listed in this report, many others were tested for and not detected. If you would like further information about the testing or sampling of our tap water, please contact our Production Manager at 724-847-7387 during regular business hours: Monday through Friday, 8:00 A.M. to 4:00 P.M. If you want to learn more about the Authority, please attend any of our regularly scheduled meetings. They are held on the fourth Thursday of each month at 7:00 P.M. unless otherwise advertised in the Beaver County Times. You can also visit us online at www.bfwater.net.